February 23, 2007

Dear Traffic Safety Partner:

The South Carolina Department of Public Safety (SCDPS), the South Carolina Division Office of the Federal Highway Administration (FHWA), the SC Department of Transportation (SCDOT), and numerous other local, state and federal agencies and safety advocates, are pleased to provide you with a copy of the first **South Carolina Strategic Highway Safety Plan: The Road Map to Safety**. This document contains a comprehensive set of transportation safety strategies, focusing on five key emphasis areas. It is our hope that the implementation of these strategies will generate significant reductions in traffic crashes, injuries, and fatalities on South Carolina's streets and highways.

For many years, South Carolina has had one of the highest mileage death rates (the number of traffic fatalities per 100 million miles driven) of any state in the nation. On average, three (3) people are killed in a crash everyday in our state, and a traffic crash is reported about every four and one-half minutes. For the last decade, over 50,000 people have been injured annually in crashes reported in our state. The economic loss from these crashes is now over two billion dollars annually. No economic cost can be computed to reflect the grief and suffering of those who have lost a loved one in a traffic crash or who have themselves been seriously injured in a crash. Traffic crashes are gravely impacting the quality of life in our state and are placing a severe burden on the state's health care delivery systems.

In an effort to tackle the seemingly insurmountable obstacles to reduce traffic crashes, injuries, and fatalities in our state, numerous agencies and individuals have come together over the last several years to participate in planning efforts to identify strategies that can make travel on our highways safer. The end result of their efforts is this document, the Road Map to Safety. The Road Map provides engineering, enforcement, educational, EMS, and public policy/legislative strategies to improve safety. Strategies are offered for Serious Crash Types, High Risk Drivers, Special Vehicles, Vulnerable Road Users, and Safety Management and Information Exchange. The strategies address key target areas such as run-off-road crashes, aggressive driving, pedestrian, and bicycle safety, and numerous other areas.

We hope that you will utilize the strategies in the Road Map that are applicable to your area. The Road Map will be updated and evaluated annually so that we can monitor our progress toward bringing down the high number of crashes, injuries, and fatalities. If you would like to obtain additional copies of the Road Map, schedule a presentation on the effort, or participate in future planning meetings, please contact the SCDOT Safety Office at (803) 737-1161 or by mail at P. O. Box 191, Columbia, SC 29201. Working together, we can improve safety on South Carolina's streets and highways.

Yours very truly,

James Schweitzer
Governor's Representative for Highway Safety
Director, SCDPS

Tony L. Chapman
Acting Executive Director
SCDOT

SPECIAL THANK YOU HIGHWAY SAFETY PARTNERS

The South Carolina Department of Transportation, Federal Highway Administration, and the safety partners began the development of the Strategic Highway Safety Plan (SHSP) in 2003 in anticipation of the passage of SAFETEA-LU. In September 2003, a Safety Conscious Planning Forum was held to identify and narrow key focus areas to be addressed in the SHSP. Participants established key safety goals that everyone agreed to support; identified strategies and countermeasures for improving safety; and recommended safety themes/umbrella messages that all the participating groups agree to support.

Forum participants included representatives from Councils of Government; Metropolitan Planning Organizations; local, state, and federal agencies; representatives from various "Es" of safety, including Engineering, Enforcement, Education, and Emergency Medical Services personnel; legislators and civic leaders; and safety advocacy group representatives. The more than 200 participants represented all the geographic regions of the state. If you are interested in getting involved in future planning efforts, contact the South Carolina Department of Transportation's Safety Office at 803-737-1161.

We also acknowledge the State of Missouri and offer them a special thank you for providing their plan as guidance for South Carolina's Strategic Highway Safety Plan.

Planning staff from the Metropolitan Planning Organizations (MPOs) and Councils of Government (COGs)	Targeted MPO, COG and Community Leaders
South Carolina Department of Transportation (SCDOT): Traffic and Utilities Engineering, District Engineers, Planning and Safety Office	South Carolina Budget and Control Board (Office of Research and Statistics)
South Carolina Department of Motor Vehicles (SCDMV)	Emergency Room and Trauma personnel
South Carolina Department of Health and Environmental Control (SCDHEC): Emergency Services Division; Injury Prevention Division	South Carolina Department of Education (SCDOE) and School Officials
South Carolina Coroners	State Infrastructure Bank
South Carolina Disabilities and Special Needs Board	American Automobile Association (AAA)
American Association of Retired Persons (AARP)	Health and Auto Insurers
Safe Communities Coalition Directors	Motorcycle Safety Foundation
Palmetto Cycling and Pedestrian Association	Palmetto Conservation Foundation
Key legislative committee staffs	Federal Motor Carrier Safety Administration (FMCSA)
Association of Counties	Municipal Association of South Carolina (MASC)
South Carolina Sheriff's Association	Law Enforcement Officers Association
Planning, design and construction consultants	South Carolina Safe Kids
Environmental groups	National Highway Traffic Safety Administration (NHTSA)
Federal Highway Administration: Division and Headquarters	South Carolina Trucking Association
South Carolina Department of Public Safety (Highway Patrol Office of Highway Safety, and State Transport Police)	

EXECUTIVE SUMMARY

Imagine if 10 fully loaded 747 airlines crashed in South Carolina during a five-year period, each time killing all on board. That same type of tragedy takes place regularly on South Carolina highways. But instead of a headline-grabbing crash that kills 500 airline passengers at once, an average of three people die each day on the state's roads. Here are the facts: Between 2000 and 2004, 5,191 people were killed in motor vehicle crashes in South Carolina. In addition, there were 260,660 injuries during the same time period.

At the time of this printing, South Carolina has one of the highest mileage death rates in the nation (the number of traffic fatalities per 100 million miles traveled), and the fatality count in the state has been over 1,000 during five of the last six years. During the last decade, over 50,000 people have been injured annually in crashes on the state's highways. This deadly trend is not acceptable. Highway tragedies are placing an overwhelming burden on the state's health care delivery systems and are destroying families across our state. The majority of these events are totally preventable, and we are determined to implement countermeasures and strategies that will allow motorists to reach their destinations safely.

To improve safety on the state's streets and highways, SCDOT and its partners in the SC Division Office of the Federal Highway Administration, the SC Department of Public Safety, and numerous other state and local agencies and safety advocacy groups have joined forces with the American Association of State Highway Transportation Officials (AASHTO) and other national organizations in a concerted effort to reduce motor vehicle crashes, injuries, and fatalities. **South Carolina's Strategic Highway Safety Plan: The Roadmap to Safety** is a focused document developed through a partnership approach that targets ways to reduce fatal and serious injuries on South Carolina highways. The Road Map was developed in compliance with federal law under the Safe, Accountable, Flexible, and Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU), signed by President Bush in August 2005.

The Road Map will serve as an umbrella guide to increase coordination, communication, and cooperation among local, state, and federal agencies; engineers; law enforcement; educators; EMS officials; planning organizations; safety advocacy groups; the insurance industry; members of the judiciary; and others concerned with highway safety throughout the State. Under federal law, SCDOT is charged with leading the statewide implementation effort to effectively deploy strategies outline in the Road Map.

Prior to the development of this document, more than 200 South Carolina safety partners came together in September 2003 to promote a closer working relationship among key players in highway safety and planning, as well as to gather ideas and input concerning strategies to improve highway safety in South Carolina. As a result of this meeting and meetings with smaller groups, the final Road Map was compiled and South Carolina's fatality reduction goal was set at 784 or fewer fatalities per year by 2010. This would be a 25% reduction from the baseline year of 2004.

To achieve this goal, the safety partners representing the engineering, enforcement, education, and emergency medical services areas must collaboratively focus their efforts and resources to reduce both traffic fatalities and injuries.

South Carolina must develop various emphasis areas and targets, and implement strategies to make significant progress in reaching the projected goals. These emphasis areas and targets were identified through extensive data analysis, current research findings, and best practices.

The implementation of the Road Map also facilitates a requirement of the federal highway reauthorization bill, SAFETEA-LU, to integrate safety into the transportation planning process at all levels, specifically the Strategic Highway Safety Plan (SHSP), the Statewide Transportation Improvement Program (STIP) and the long-range transportation plans developed by State Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs), respectively. Specific consideration was given to ensuring consistency between the Road Map and the development of the South Carolina Statewide Multimodal Transportation Plan by incorporating common goals, objectives, and strategies from each planning process.

ESSENTIAL EIGHT

To make significant progress toward improving safety, and to reach the fatality reduction goal established by the safety partners, eight (8) key strategies have been identified during the planning process. Fulfillment of these strategies will require the commitment of human and financial resources by all of the state's safety partners and the implementation of multi-disciplinary efforts to ensure success. The eight key strategies include:

- Collaborating with Other Agencies to Maintain Support, and Improve Existing Safety and Licensing Legislation
- Effectively Deterring, Identifying, Arresting, and Adjudicating Alcohol and Other Drug Impaired Drivers and Pedestrians
- Expanding, Improving, and Maintaining Roadway Clear Zones and Visibility Features (i.e. markings, signs, lighting, etc.)
- Expanding the Installation of Shoulder, Edgeline, and Centerline Rumble Strips and Protective Barriers, and the Use of Wider, Paved Shoulders
- Improving Communications Strategies
- Improving Current Data Systems and Analysis Methods
- Increasing Enforcement and Public Information and Education on Traffic Safety Issues
- Increasing Occupant Restraint Usage

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MISSION

The mission of the Road Map is to develop, implement, and manage an integrated multi-stakeholder process to improve highway safety.

VISION

Highway users will reach their destinations safely.

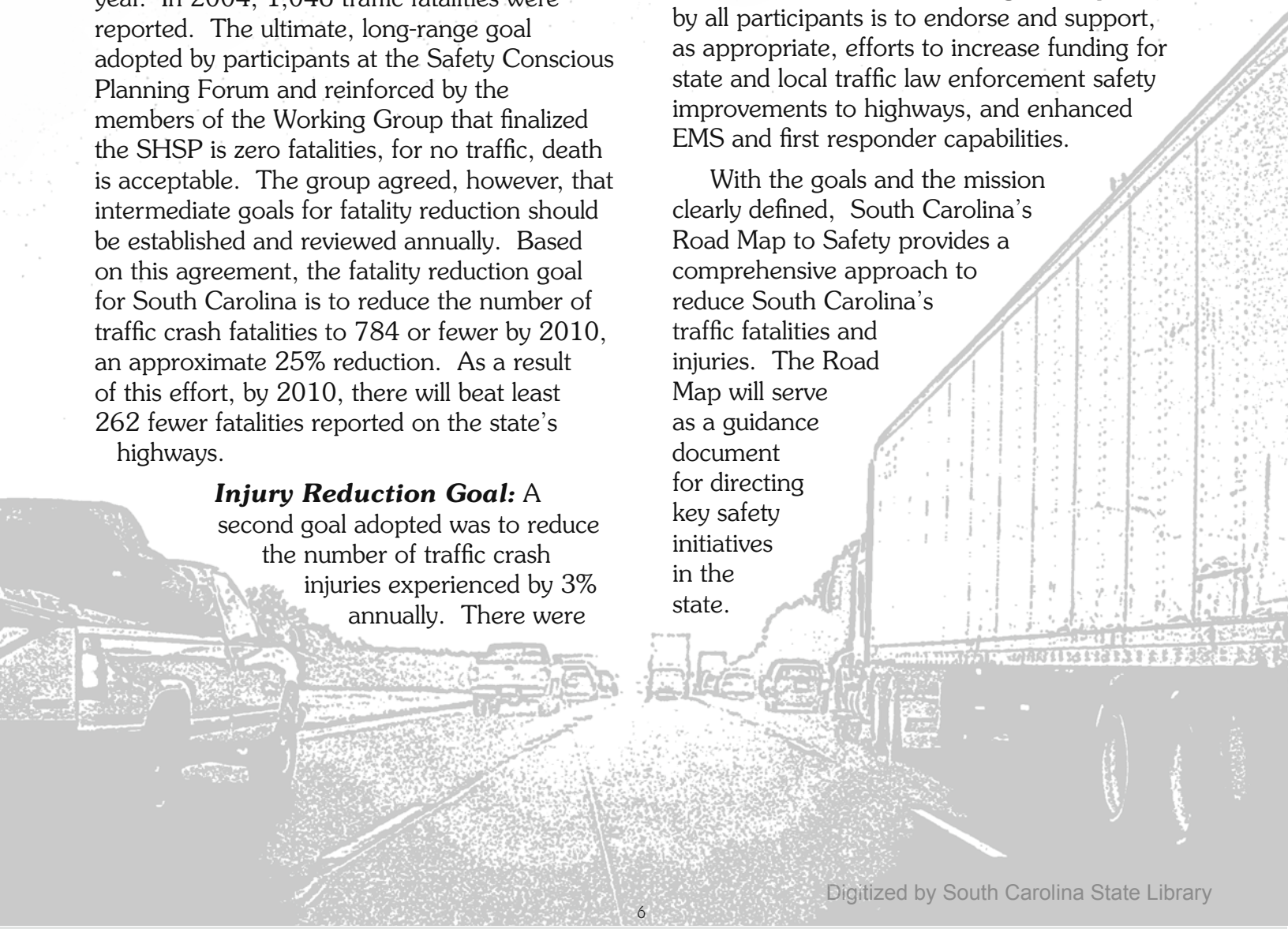
SOUTH CAROLINA'S GOALS

Fatality Reduction Goal: In developing the SHSP, 2004 was adopted as the baseline year. In 2004, 1,046 traffic fatalities were reported. The ultimate, long-range goal adopted by participants at the Safety Conscious Planning Forum and reinforced by the members of the Working Group that finalized the SHSP is zero fatalities, for no traffic, death is acceptable. The group agreed, however, that intermediate goals for fatality reduction should be established and reviewed annually. Based on this agreement, the fatality reduction goal for South Carolina is to reduce the number of traffic crash fatalities to 784 or fewer by 2010, an approximate 25% reduction. As a result of this effort, by 2010, there will beat least 262 fewer fatalities reported on the state's highways.

Injury Reduction Goal: A second goal adopted was to reduce the number of traffic crash injuries experienced by 3% annually. There were 51,226 injuries reported in the baseline year of 2004. This goal was based on injury reduction trends over the last decade and was considered reasonable, considering the considerable growth experienced in the state's annual computation of vehicle miles traveled and significant increases in the number of licensed drivers and vehicles registered, as all of these factors contribute to significantly higher levels of exposure.

Safety Resources Goal: All participants in the planning process recognized that to expand and increase efforts to improve safety requires an increased level of both human and financial resources. The third goal adopted by all participants is to endorse and support, as appropriate, efforts to increase funding for state and local traffic law enforcement safety improvements to highways, and enhanced EMS and first responder capabilities.

With the goals and the mission clearly defined, South Carolina's Road Map to Safety provides a comprehensive approach to reduce South Carolina's traffic fatalities and injuries. The Road Map will serve as a guidance document for directing key safety initiatives in the state.



INTRODUCTION

For many years, South Carolina has had one of the highest mileage death rates in the nation. The mileage death rate is the number of traffic deaths per 100 million vehicle miles traveled. In spite of numerous, on-going efforts by the state's safety partners, South Carolina remains among the top ten states in this category.

While the mileage death rate allows the state to compare itself with other states across the nation, it is the actual number of fatalities reported each year that demonstrates the significance of the state's traffic crash problem for the average South Carolinian. For the last decade, an average of three (3) people have died daily in traffic crashes on the state's streets and highways. Between 2000 and 2004, 5,191 people died in motor vehicle crashes in South Carolina. *(See Figure 1.)*

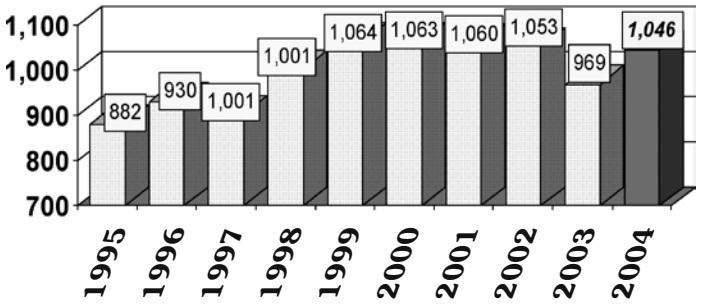
This pattern of fatal crashes cannot continue and should not be acceptable. The continued high number of traffic fatalities is negatively impacting the quality of life for hundreds of South Carolina families every year. South Carolina's safety partners are committed to reversing this trend. The daily process of traveling to work, school, and home should not be a life-threatening experience.

These crashes place a tremendous economic burden on the state, with over 2 billion dollars in economic loss last year alone. Traffic crashes are severely taxing the state's health care delivery and emergency response systems, as health care costs continue to climb. The sad fact is that the majority of traffic crashes are totally preventable.

As the clock ticks, the number of persons killed or injured in South Carolina continues to grow.

- One traffic crash is reported every 4.8 minutes

Figure 1: SC Traffic Fatalities 1995 - 2004

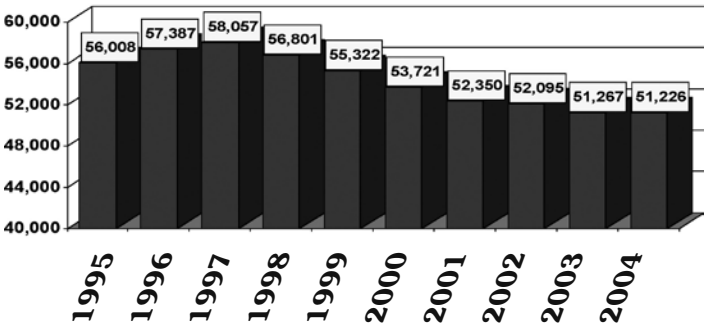


- One fatal crash is reported every 9.3 hours
- One injury crash is reported every 16.2 minutes
- One property damage crash is reported every 6.9 minutes
- One person is killed in a traffic crash every 8.4 hours
- One person is injured in a speed-involved crash every 10.3 minutes
- One person is injured or killed in an alcohol-related crash every 2.2 hours
- One fatal or injury crash with a driver 19 or under is reported every 2 hours
- One unrestrained person* is killed every 15 hours
- One bicyclist is killed every 17.4 days
- One motorcyclist is killed every 4.3 days
- One pedestrian is killed every 4.2 days
- One child under 6 is seriously injured or killed every 5 days

Source: SCDPS 2004 Traffic Collision Fact Book
* Occupants of cars, trucks, and vans only

In addition to having the fifth highest motor vehicle crash rate in 2004, South Carolina also ranked at the top in several other categories as shown in Figure 3. The state has the 4th highest DUI fatality rate in the nation; the 1st

Figure 2: SC Traffic Injuries
1995 - 2004



highest speed related fatality rate. The state's motorcycle fatality rate has been the highest in the nation for several years. South Carolina has the 4th highest pedestrian fatality rate in the nation and the 7th highest bicycle fatality rate of any state in the nation. These rates, and the unnecessary deaths that they represent are simply unacceptable. The majority of the fatalities are the result of bad choices made by drivers and totally preventable causes.

The Road Map will serve as an umbrella guide to increase coordination, communication, and cooperation among local, state and federal agencies; engineers; law enforcement; educators; EMS officials; planning organizations; safety advocacy groups; the insurance industry; members of the judiciary; and others concerned with highway safety throughout the state. Under federal law, SCDOT is charged with leading the statewide implementation effort to effectively deploy strategies outlined in the Road Map.

South Carolina Traffic Fatalities: Where Does South Carolina Rank?
(All Figures are for 2004 except Motorcycle Rate which was for 2003)

CATEGORY	RANK IN THE COUNTRY	SOUTH CAROLINA's RATE	NATIONAL RATE
MILEAGE DEATH RATE (FARS figure based on deaths per 100 million Vehicle Miles of Travel)	5	2.11	1.45
DUI DEATH RATE (FARS figure based on deaths per 100 million Vehicle Miles of Travel)	4	0.94	0.57
BICYCLE DEATH RATE (Based on deaths per million resident population)	4	5.2	2.5
PEDESTRIAN DEATH RATE (Based on deaths per million resident population)	7	23.0	16.5
SPEED RELATED DEATH RATE (FARS figure based on deaths per 100 million Vehicle Miles of Travel)	1	0.93	0.45
MOTORCYCLE DEATH RATE (FARS figure based on deaths per 100 million Vehicle Miles of Travel)	1	12.8	6.9

THE ROAD MAP

To improve safety on the state's streets and highways, SCDPS, FHWA, SCDOT, and numerous other state and local agencies and advocacy groups have joined forces with AASHTO officials and other national organizations in a concerted effort to reduce motor vehicle crashes, injuries, and fatalities. The state's safety partners have carefully examined existing efforts and have determined that a more comprehensive and coordinated approach is needed to reverse the deadly trend on the state's highways. This document, **South Carolina's Strategic Highway Safety Plan: The Road Map to Safety (Road Map)**, provides such a comprehensive and coordinated approach. It is a focused document developed through a partnership approach that targets ways to reduce fatal and serious injuries on South Carolina's highways. The Road Map was developed in compliance with federal law under the Safe, Accountable, Flexible, and Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU), signed by President George W. Bush in August 2005.

The implementation of the Road Map also facilitates a requirement of the federal highway reauthorization bill (SAFETEA-LU) to integrate safety into the transportation planning process at all levels. Specifically, the Strategic Highway Safety Plan (SHSP), the Statewide Transportation Improvement Program (STIP), and the long-range transportation plans developed by State Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs), are charge with the implementation responsibilities. Specific consideration was given to ensuring consistency between the Road Map and the development of the South Carolina Statewide Multimodal Transportation Plan by incorporating common goals, objectives , and strategies from the planning process.

The purpose of this document is to focus the state's safety partners in a coordinated and comprehensive effort to improve highway safety. The Road Map offers proven, tested, and experimental strategies that will be effective in reducing traffic crashes, injuries, and fatalities: the strategies are most effective when implemented in a multi-disciplinary approach. The Road Map does not discuss every safety strategy currently available, nor does it address every type of crash problem. Only the most significant types of crash problems are addressed, as the safety partners believe that a targeted, focused effort will be the most effective in generating significant injury and fatality reductions. Strategies have been included that provide the greatest potential to influence a reduction in the most severe types of crashes.

In developing the Road Map, safety partners:

- Used the latest research, input from safety professionals, and extensive data analysis to guide the crash-reduction strategy selection process;
- Addressed strategies that encompass the highway and its surrounding environment, the vehicle, and the highway user;
- Incorporated strategies from the four "E's" of safety; and
- Included targeted strategies at both the state and local level.

BACKGROUND OF THE ROAD MAP

Development of the Road Map actually began in 2002 when a meeting was held with safety partners to plan for a Safety Conscious Planning Forum. More than 25 transportation and safety partners attended the meeting. The purpose was to articulate the objectives, outline an agenda, develop a participant list, and address both the logistical and process issues for conducting the event.

The Forum objectives developed by the planning group were as follows:

- Brief the safety and planning communities on current safety issues and planning practices.
- Facilitate a partnership that encourages collaborative planning and project selection among transportation planners and SCDOT leadership, the MPOs (10), and the COGs (10).
    - Discuss and define the elements, methods, and procedures for proactive safety thinking and planning.
    - Inform the planning community about the numerous products, programs, tools, and other resources available to support safety planning and programming.
    - Outline and institutionalize a process for providing high crash location data to MPOs and COGs.
    - Develop a "cookbook" describing the data that are available, providing access instructions, and explaining techniques and strategies for using data in the planning deployment and evaluation processes.
    - Build coalitions at the local level and encourage engineers to meet with law enforcement, community coalitions, and others to discuss project selection and design issues.
    - Raise awareness among political leaders, the media, and the public about South Carolina safety issues.
        - Create and build consensus on a data-driven safety theme or message that all partners consistently deliver.
        - Develop internal communications strategies and plans for publicizing safety information.
    - Develop collaborative strategies for gaining grassroots support and educating politicians on safety issues.
    - Promote ITS technology for managing safety.

As a result of the planning meeting, four teams were established to plan the Forum. These included logistics, data resources, goals/objectives, and themes/messages. Participants serving on the teams represented all the "E's" of safety, including engineering, EMS, enforcement, education, and economic incentives, as well as the private sector and safety advocacy groups.

The South Carolina Safety Conscious Planning Forum was held on September 23, 2003, with over 200 people representing the entire safety and planning community in the state in attendance. Participants were provided with copies of the plans of other agencies and had the opportunity to learn about each agency's safety planning process. Participants were also provided with a Data Guide that includes all the various safety data systems operated in the state, contact information, the types of data available, and how to access that data.

During the meeting, participants were divided into four groups: Adopting Safety Messages/Themes/Communications; Setting Safety Goals and Objectives; Integrating Safety into the Planning Process; and Promising Countermeasures and Solutions. Each group reported their findings at the end of the day. The entire Forum adopted safety goals that all the agencies agreed to support; adopted themes/messages that all would support; and prioritized safety solutions/countermeasures/strategies that they believed could have the greatest impact on safety. The participants agreed that a task force or working group should be formed to continue the work of the Forum, toward the development of a comprehensive highway safety plan.

Following the Forum, SCDOT joined in the AASHTO pilot state program on the Integrated Safety Management Process (ISMP). SCDOT received training and technical assistance on the ISMP process as a means to build a comprehensive highway safety plan. As a pilot state, SCDOT developed an organizational structure to build the plan and completed a comprehensive analysis of collision and other data to identify the primary emphasis areas to be included in the plan. The entire process was data driven. The organizational structure included plans for an Executive Committee comprised of agency heads that control personnel and resources needed for the plan implementation; a Leadership Team, comprised of director-level positions from the "E's" of safety; and Emphasis Area Teams to build emphasis area action plans. Both the Leadership Team and the Emphasis Area Teams included suggested representation from all the "E's" of safety, as well as geographic representation, and representation from all levels of government (local, state and federal). Persons recommended for the teams were respected experts in their field. Teams also included representatives of COGs and MPOs, safety advocacy groups, and legislative staff.

In anticipation of the SAFETEA-LU requirements to build a SHSP, SCDOT also examined all existing safety programs that were operational within SCDOT. A listing was compiled of all these programs. SCDOT, working with FHWA and SCDPS named an individual from each of their agencies to champion the building of the SHSP. These individuals collectively established a Working Group to build the plan. Work began in the summer of 2006 with numerous planning meetings by the Working Group. The Group decided to adopt the goals from the Forum and refined further the emphasis areas identified during the ISMP process. The entire process was data driven, with emphasis areas and goal selection based on data analysis. This document is the combined product of the recommendations of over 200 safety partners provided through the Safety Conscious Planning Forum; data and information collected during the ISMP Pilot Project; the recommendations of the Working Group; and the analysis and expertise provided by SCDOT staff. The Road Map has also incorporated proven, tried and experimental strategies from various guidebooks included in the National Cooperative Highway Research Program's Report 500 series.

Everyone involved in the process agrees that the Road Map is a living document and that it will evolve over time. Continued analysis will determine progress toward goal attainment and whether emphasis areas will change.

Resources, both human and financial, are a crucial factor in the implementation and deployment of the Road Map. The resource allocations made by each agency or organization toward the implementation of the Road Map will determine the level of success toward meeting fatality and injury reduction goals.

SOUTH CAROLINA'S CHALLENGES

South Carolina had approximately 3.3 million licensed drivers and vehicles traveling 48.77 billion miles in 2004. While there have been significant increases in the number of licensed drivers, registered vehicles, and miles traveled, the number of lane miles of roadway have not increased commensurately. The state's highways, particularly around urban areas, are becoming more and more congested. With increased development, the state's secondary roads are carrying traffic volumes far beyond their capacity; these roads have sharp curves, narrow shoulders (if any), and in some areas of the state, steep drop-offs. EMS capability, particularly in rural areas, needs to be further expanded. Funding has not been sufficient to address the state's safety problems. The challenge faced by safety partners in South Carolina is significant. Key to sustaining a sound and safe highway system and to achieving the Road Map's strategic plan goals is the maintenance of a strong foundation. That foundation must be composed of the following basic elements and adequate funding to support them:

- A strong data collection and analysis system;
- Well-trained, informed, and equipped law enforcement and regulatory personnel;
- Well-trained and informed engineers, planners, and highway operations and maintenance personnel;
- Well-trained and informed state, county, and city governmental agencies;
- An effective and efficient operator licensing system designed to monitor operator licensing and personal performance on the highway system;
- An effective emergency medical and trauma system composed of well-trained and equipped personnel strategically located around the state for quick response to highway crashes;
- A strong multidisciplinary coalition organized to identify strategies to address highway safety problems, strategically deploy those strategies, and monitor the impact of their collective efforts;
- An effective, well coordinated multi-agency/jurisdictional incident management process and plan;
- An effective and responsive court system with well-trained and informed judges, prosecutors, and other legal and support personnel;
- Highway users well-trained and educated in good driving behaviors, regulations, and "share the road" techniques; and
- Sound and effective highway safety laws and ordinances.

Without these vital elements in place, the highway safety system deteriorates in efficiency and effectiveness. Most of these foundational elements cannot be tracked directly to the prevention of crashes and injuries; however, they are critical in understanding elements of the crash problem. These elements include planning, designing, building, operating, and maintaining the highway; verifying legal operators; controlling and documenting high risk driving behaviors; responding appropriately to crash incidents; properly prosecuting violators; and providing quality treatment of injured victims. Another critical element is establishing a multi-disciplinary approach to safety that includes partners from all the "E's" of safety, such as engineering, enforcement, education, and emergency medical services. Research documents well the success in safety that can be achieved when solutions incorporate the four "E's". South Carolina's

Road Map offers such a multi-disciplinary approach and recognizes the necessity for the foundational elements described above. The Road Map includes both goals and strategies to strengthen these core foundational elements.

SHARED RESPONSIBILITY

The responsibility for highway safety is shared by many groups and individuals including: highway users; federal, state, county, and local governments and elected officials; safety advocates; and nongovernmental organizations. Government agencies, elected officials, and advocacy groups, through legislatively mandated mission or organizational charter, have an obligation to address highway safety issues and to secure the necessary resources, policies, and laws that will promote and increase safety on the highways. These responsibilities include highway planning and programming, design, operation, and maintenance; enforcement of laws; driver and vehicle licensing; development of safety initiatives; enactment of highway safety laws; and the detection of, response to, and safe management of the crash scene.

The ultimate responsibility for safety, however, lies in the hands that grasp the steering wheel: the individual driver. Obtaining a license and access to the highway system is a privilege, not a right. Highway users must assume the responsibility to operate their vehicles in a safe, law abiding, and courteous manner. In addition, they must use safety belts and child safety seats and should use approved motorcycle helmets, bicycle helmets, and other personal protective equipment that help mitigate injuries in the event of a crash.

Unfortunately, each year many people die unnecessarily because certain basic traffic safety principles are not followed. These principles are inherent in South Carolina's Road Map and the strategies contained in the document.

They include:

PRINCIPLE #1:

Do not exceed posted speed limits nor drive too fast for highway and weather conditions.

- Speed is a factor in approximately 42% of all fatalities. South Carolina currently has the highest speed-related fatality rate in the nation.

PRINCIPLE #2:

Do not drive if you are impaired.

- Alcohol/drug use is involved in more than 48% of all fatalities. South Carolina currently has the 4th highest DUI fatality rate in the nation.

PRINCIPLE #3:

Always utilize occupant protection devices.

- More than 60% of those killed in crashes were not wearing a safety belt. South Carolina currently has one of the lowest safety belt utilization rates in the nation.

PRINCIPLE #4:

Always wear appropriate protective equipment, including helmets while operating a motorcycle.

- Nearly 82% of those killed in motorcycle crashes were not wearing a helmet. South Carolina has the highest motorcycle fatality rate of any state in the nation.

With these principles in mind, South Carolina's Road Map, with its clearly defined goals, emphasis areas, targets and strategies is designed to achieve significant reductions in crashes, injuries, and fatalities. We ask

all the safety partners to now embrace the guidance provided by the Road Map and commit to coordinated and integrate their planning, programs, and resources to achieve notable safety advancements.

KEY EMPHASIS AREAS, TARGETS, OBJECTIVES AND STRATEGIES

Extensive data analysis was conducted by the SCDOT to determine the extent of South Carolina's traffic crash problem and to identify the areas of safety that represented the majority of fatalities and injuries. As a result of this analysis, and after consultation with the Forum participants and members of the working group, five key emphasis areas and 24 targets were identified and addressed in the Road Map. Data used in this analysis is located in Appendix C. The following is a list of the key emphasis areas and targets.

Baseline Year for Performance Measures: 2004

Emphasis Areas:

- Serious Crash Types
- High Risk Drivers
- Special Vehicles
- Vulnerable Roadway Users
- Management Information and Exchange

The following sections will provide a description of the five key emphasis areas, objectives for each emphasis area, and the specific targets to be addressed in each area. Strategies to achieve the objectives listed for each emphasis area are listed by target and emphasis area in Appendix A. These strategies reflect each of the four "E's" of safety and the commitment of safety partners from these disciplines to implement the strategies outline as feasible. These strategies are intended to serve s a toolbox and a resource for the safety partners to utilize.

EMPHASIS AREA I – SERIOUS CRASH TYPES

A comprehensive review of South Carolina's crash data revealed that several specific crash types result in numerous fatalities and injuries each year. Based on data analysis, nine serious crash types are of particular concern. The most significant of the nine is run-off-road collisions, with between one-third and one-half of all fatalities the result of this type of collision.

Serious Crash Types

Targets

- Run-off-Road (includes hydroplaning and median crossover)
- Horizontal Curves
- Intersection
- Roadside Clear Zone – Trees and Utility Poles
- Head-On
- Secondary Collisions on Interstates
- Work Zone
- Animals
- Railgrade Crossing

Collectively, these serious crash types resulted in 6,241 fatalities and 28,832 injuries between 2000 – 2004.

Table 1 shows a five-year total for fatalities and injuries by each of the serious crash types. As Table 1 indicates, run-off-road and

Table 1: Fatalities and Injuries by Crash Type 2000 – 2004*

CRASH TYPE	5-Year TOTAL FATALITES	5-Year TOTAL INJURIES
Run-Off-Road	2,202	6,515
Horizontal Curves	1,350	3,090
Intersection	969	6,315
Roadside Clear Zones	779	1,991
Head-On	677	2,551
Secondary Crashes on Interstates	**110	**3,538
Work Zone	88	4,205
Animals	35	4,322
Railgrade Crossings	31	170

*Crashes can involve more than one factor (e.g. speeding, impaired by alcohol or other drugs); therefore, adding these numbers together will represent more than the total number of fatalities and injuries.
**Estimate only-data not currently captured.

horizontal curve crashes result in the most fatalities; run-off-road and intersection crashes result in the most injuries. Below each crash type is a five-year total for fatalities and injuries, a brief review of the crash problem, and a list of selected strategies.

RUN-OFF-ROAD CRASHES

5 – YEAR TOTAL

FATALITIES – 2,202 INJURIES – 6,515

The Problem

Run-off-Road (ROR) collisions in South Carolina are an extremely serious problem, resulting in more than 2,202 fatalities and 6,515 injuries between 2000 and 2004. More than 42% of the fatalities in the state are attributed to vehicles leaving the roadway; the state's proportion of ROR fatalities is well above the national average for this crash type. When vehicles leave the roadway, the severity of the crash increases when the vehicle strikes a ditch, sideslope, or fixed object. Many drivers overcorrect, come back onto the roadway and strike another vehicle head-on. The purpose of these strategies is to keep vehicle on the road and to mitigate the severity of the crash if the vehicle does leave the roadway.

Objectives

- To reduce the number of Run-Off-Road traffic crashes, related traffic injuries and related traffic fatalities reported on South Carolina's roads and highways
- To keep vehicles from encroaching on the roadside
- To minimize the possibility of crashing into an object or overturning if the vehicle travels off the shoulder
- To reduce the number of hydroplaning crashes, injuries, and fatalities
- To reduce the number of Cross Over Crashes, injuries, and fatalities

The strategies to achieve the objectives listed above are located in Appendix A.

HORIZONTAL CURVE CRASHES

5 – YEAR TOTAL

FATALTIES – 1,350 INJURIES – 3,090

The Problem

There are an estimated 10 million horizontal curves in the United States on two-lane highways alone. The average crash rate for horizontal curves is about three times that for highway tangents. In South Carolina, 26% of all fatalities in the past five years occurred along horizontal curves.

Objectives

- To reduce the number of Horizontal Curve traffic crashes, related traffic injuries, and related traffic fatalities reported on South Carolina roads and highways
- To reduce the possibility of a vehicle leaving its lane and either crossing the roadway centerline or leaving the roadway at a horizontal curve
- To minimize the adverse consequences of leaving the roadway at a horizontal curve

The strategies to achieve the objectives listed above are located in Appendix A.

INTERSECTION CRASHES

5 – YEAR TOTAL

FATALITIES – 969 INJURIES – 6,315

The Problem

In South Carolina, intersection crashes account for more than 18% of the fatalities. Severe crashes at signalized intersections are usually a result of non-compliance with the traffic signal. Red-light running crashes are continuing to increase in South Carolina. Severe crashes at unsignalized intersections occur when one or more of the vehicles are traveling at a high rate of speed upon impact. Potential causes of crashes may be sight distance issues, poor visibility and gap judgment, improper use of traffic control devices, excessive speed, and non-compliance with the traffic control devices that are present.

Objectives

- To reduce the number of Intersection traffic crashes, related traffic injuries and fatalities reported on South Carolina's roads and highways
- To improve the management and access near unsignalized intersections
- To reduce the frequency and severity of intersection conflicts through geometric design improvements
- To improve sight distance at unsignalized intersections
- To improve the availability of gaps in traffic and assist drivers in judging gap sizes at unsignalized intersections
- To improve driver awareness of intersections as viewed from the intersection approach
- To choose appropriate intersection traffic control to minimize crash frequency and severity
- To reduce operating speeds on specific intersection approaches
- To guide motorists more effectively through complex intersections
- To improve driver awareness of intersections and signal controls
- To improve driver compliance with traffic control devices
- To improve access management near signalized intersections
- To improve safety through other infrastructure treatments

The strategies to achieve the objectives listed, are located in Appendix A.

ROADSIDE CLEAR ZONE – TREES OR POLES

5 – YEAR TOTAL

FATALITIES – 779 INJURIES – 1,991

The Problem

When vehicles leave the road (Run-off-Road/ROR crashes), they are likely to strike an object. Two of the more common objects they strike are trees and poles. Crashes where a tree or pole was hit accounted for 15% of the fatalities between 2000 and 2004. Trees are the most commonly struck fixed object in South Carolina crashes in which the vehicle leaves the roadway. Vehicles are more likely to impact an object when drivers lose control and an object is close to the road. The strategies listed below reduce the chances of an errant vehicle impacting a tree or pole.

Objectives

- To reduce the number of traffic injuries and traffic fatalities reported on South Carolina's roads and highways involving trees and/or poles

The strategies to achieve the objective listed above are located in Appendix A.

HEAD-ON CRASHES

5 – YEAR TOTAL

FATALITIES – 667 INJURIES – 2,551

The Problem

More than 13% of the state's fatalities are attributed to head-on crashes. Head-on crashes occur when vehicles leave their driving lanes to the left, crossing either the centerline of an undivided road or the median of a divided highway. The strategies listed below keep vehicles from impacting head-on or alert drivers they are about to leave their driving lane, exposing them to head-on type crashes.

Objectives

- To reduce the number of Head-On traffic crashes, injuries and fatalities reported on South Carolina's roads and highways
- To minimize the possibility of crashing into oncoming vehicles

The strategies to achieve the objectives listed above are located in Appendix A.

SECONDARY CRASHES ON INTERSTATES

5 – YEAR TOTAL

FATALITIES – 110*
INJURIES – 3,538*

The Problem

During the last five years, nearly 48,000 traffic crashes have been reported on the interstates in South Carolina. National studies indicate that secondary crashes account for over 20% of all crashes. The USDOT estimates that 18% of the fatalities occurring on interstates are due to secondary crashes. Some of South Carolina's fatal crashes on the interstates have been secondary collisions.

Objectives

- To reduce the number of secondary traffic crashes, injuries, and fatalities on interstates
- To improve communications of interstate conditions

The strategies to achieve the objectives listed above are located in Appendix A.

* Estimate only – data not currently captured

WORK ZONE CRASHES

5 – YEAR TOTAL

FATALITIES – 88 INJURIES – 4,205

The Problem

During the last five years, almost 10,000 traffic crashes have been reported in work zones in South Carolina, resulting in thousands of injuries. In the last four years, 88 people have died in work zones in our state. In 2004 21 people were killed in our work zones.

Work zone crashes are continuing to increase. Changing driver behavior in highway work zones can also help to improve safety throughout the highway system.

Objectives

- To reduce the number of Work Zone related traffic crashes, injuries, and fatalities occurring on South Carolina roads and highways
- To implement the Rule on Work Zone Safety and Mobility

The strategies to achieve the objectives listed above are located in Appendix A.

CRASHES INVOLVING ANIMALS

5 – YEAR TOTAL

FATALITIES – 35 INJURIES – 4,322

The Problem

In South Carolina collisions involving animals in the roadway accounted for 35 fatalities and 4,322 injuries between 2000 and 2004. The animal most commonly involved in these types of crashes is deer.

Objectives

- To reduce the number of crashes, injuries and fatalities involving deer and other animals

The strategies to achieve the objectives listed above are located in Appendix A.

RAILGRADE CROSSING CRASHES

5 – YEAR TOTAL

FATALITIES – 31 INJURIES – 170

The Problem

In the last twenty years, South Carolina has made significant progress in reducing the number of railgrade crossing collisions. This type of collision is included in the Road Map because of the tremendous economic cost from this type of crash and the high proportion of fatalities to motor vehicle occupants when these events occur. Many grade crossing crashes are the result of drivers deliberately circumventing or otherwise purposely violating active control devices, such as flashing lights, bells, and crossing arms.

Objectives

- To reduce the number of Railgrade Crossing traffic crashes, related traffic injuries and fatalities reported on South Carolina's roads and highways

The strategies to achieve the objective listed above are located in Appendix A.

EMPHASIS AREA II: HIGH RISK DRIVERS

During the last five years, 1 out of every 15 licensed drivers in South Carolina was involved in a reportable crash. For young drivers ages 15 - 24, the problem was even more severe, with one out of every seven young male drivers involved in a reportable crash and one out of every nine young female drivers involved in a crash. Older drivers in the state, particularly those 70+, have a crash involvement rate similar to young drivers; however, the problem is mitigated by the fact that they drive fewer miles. The types of collisions in which older drivers are involved tend to be less severe than those involving younger drivers.

High Risk Drivers

Targets

- Occupant Protection Devices – Nonuse and Misuse
- Impaired by Alcohol or Other Drugs
- Aggressive Driver
- Young Driver – Less Than 21
- Older Driver – Over 65
- Distracted or Fatigued Driver
- Licensing and Driver Education Requirements
  - Unlicensed, Revoked, or Suspended
  - International Population Groups
  - Interchange of licensing information among jurisdictions

Table 2 shows a five-year total for highway fatalities and injuries by high-risk driver category.

Below each high-risk driver target is a five-year total for fatalities and injuries, a brief review of the crash problem, and a list of selected strategies.

OCCUPANT PROTECTION DEVICES – NONUSE OR MISUSE

5 – YEAR TOTAL

FATALITIES – 2,664 INJURIES – 6,309

Focus: Safety Belts; Child Restraint Devices

The Problem

Drivers and passengers choosing to properly use restraint devices is one of the best ways to prevent fatalities and injuries when involved in traffic crashes. According to South Carolina's June 2004 Safety Belt Use Observational Survey, approximately 67.5 %

Table 2: Fatalities and Injuries by High Risk Driver Target 2000 – 2004*

HIGH RISK DRIVER	5 – Year TOTAL FATATLITIES	5 – Year TOTAL INJURIES
Occupant Protection Devices:		
Nonuse or Misuse	2,664	6,309
Impaired by Alcohol and/or Other Drugs	2,517	3,346
Aggressive Driving **	1,366	4,577
Young Driver – Less Than 21	1,010	3,743
Older Driver – 65 or Older	761	1,461
Distracted or Fatigued	427	2,111
Licensing Requirements:		
Unlicensed, Revoked, or Suspended***	51	5,015

* Crashes can involve more than one factor (e.g. speeding, impaired by alcohol or other drugs); therefore, adding these numbers together will represent more than the total number of fatalities and injuries.
** Includes speeding, driving too fast for conditions and following too close (FTC).
*** 2001 - 2004

of people traveling on South Carolina highways were buckled up. The survey conducted in June 2006 revealed a 72.5% seat belt usage rate. In 2004, one unrestrained person was killed every 15 hours. There were 1,033 automobile and truck occupants totally ejected from the vehicles in which they were riding. Of these, 229, or 22.2%, were killed. Of the 260,737 occupants not ejected, 553, or 0.2%, were killed. The percentage of fatalities suffered by ejected occupants was more than 100 times that of occupants not ejected.

In 2004, there were 10,334 children under the age of six who were occupants of a car or truck that was involved in a traffic collision. Of these, 7,044 were restrained by a child safety seat, 2,725 by some other restraint (seat belt, seat/lap combination), 374 were unrestrained, and for 191, restraint usage was unknown.

Of the 806 occupant fatalities with known restraint usage, 583 (72.3%) were not restrained, and 223 (27.74%) were restrained. More than 13% of those occupants not wearing a seat belt at the time of collision were severely injured or killed. This compares to less than 1.0% for those wearing a seat belt.

Objectives

- To reduce the number of traffic crashes, injuries, and fatalities involving unrestrained occupants
- To increase the use of occupant restraint devices by all vehicle occupants
- To increase proper restraint usage
- To increase proper usage among low usage populations in South Carolina, including minority populations and rural populations

The strategies to achieve the objectives listed above are located in Appendix A.

IMPAIRED BY ALCOHOL OR OTHER DRUGS

5 – YEAR TOTAL

FATALITIES – 2,517 INJURIES – 3,346

The Problem

It is estimated that three of every 10 Americans will be involved in an alcohol-related traffic crash at some time in their lives. Despite all the attention, resources, and public policies that have been directed toward removing the impaired driver from behind the wheel of a motor vehicle, between 2000 and 2004, alcohol and/or other drugs contributed to 2,517 or 48.9% of the traffic crash fatalities in South Carolina. In 2004, a total of 184 persons were killed and 3,167 were injured in alcohol & drug-related traffic crashes. South Carolina has the 4th highest DUI fatality rate in the nation.

Objectives

- To reduce the number of traffic crashes, injuries, and fatalities involving drivers impaired by alcohol and/or drugs
- To reduce the number of high-BAC offenders

The strategies to achieve the objectives listed above are located in Appendix A.

AGGRESSIVE DRIVER

5 – YEAR TOTAL

FATALITIES – 1,366 INJURIES – 4,577

Focus: Speeding; Driving too fast for conditions; Following too close

The Problem

Volume 1 of the National Cooperative Highway Research Program (NCHRP) Report 500, defines "aggressive driving" as "operating a motor vehicle in a selfish, pushy, or impatient manner, often unsafely, that directly affects other drivers." Perceptions among law enforcement and the motoring public are that aggressive driving is becoming more prevalent. In 2004, speed, driving too fast for conditions, and following too closely collectively contributed to 316 or 30% of traffic crash fatalities in South Carolina. South Carolina has the highest speed-related fatality rate in the nation.

Objectives

- To reduce the number of traffic crashes, injuries, and fatalities involving aggressive drivers
- To improve the driving environment to eliminate or minimize the external "triggers" of aggressive driving
- To reduce the number of speed related traffic crashes, injuries, and fatalities
- To reduce the number of driving too fast for conditions related traffic crashes, injuries, and fatalities
- To reduce the number of following too closely related traffic crashes, injuries, and fatalities

The strategies to achieve the objectives listed above are located in Appendix A.

YOUNG DRIVERS – LESS THAN 21

5 – YEAR TOTAL

FATALITIES – 1,010 INJURIES – 3,743

The Problem

Motor vehicle crashes are the leading cause of death among 15- to 20-year olds. According to the U.S. Department of Transportation, 3,620 drivers in this group died in car crashes in 2004, accounting for 14% of all the drivers involved in fatal crashes and 18% of all the drivers involved in police-reported crashes. Twenty-four percent of the teen drivers killed were intoxicated. In 2002 (latest data available), the estimated economic cost of police-reported crashes involving drivers between the ages of 15 and 20 years old was $40.8 billion, according to the National Highway Traffic Safety Administration (NHTSA).

Among licensed drivers, young people between the ages of 15 and 20 years old have the highest rate of fatal crashes relative to other age groups, including the elderly. In fact, the risk of being involved in a fatal crash for teens is three times greater than for drivers age 65 to 69.

South Carolina teens make up about 6% of all drivers in the state but are involved in about 13% of traffic collisions. In 2004, 114 teenagers died in automobile collisions across the state, accounting for 13 more teen fatalities than the 101 recorded in 2003. Twenty of the 114 fatalities were wearing seat belts, compared with 23 the year before.

Objectives

- To reduce the number of traffic crashes, injuries, and fatalities involving young drivers under the age of 21
- To reduce underage sales of alcohol to minors

The strategies to achieve the objectives listed above are located in Appendix A.

OLDER DRIVERS – 65 OR OLDER AND/OR MEDICALLY IMPAIRED

5 – YEAR TOTAL

FATALITIES – 761 INJURIES – 1,464

The Problem

The aging population in South Carolina is growing rapidly. The U.S. Census Bureau projects that by the year 2030, the state's 65 and over population will be nearly double what it was in 2000. About 1.1 million people who are 65 and over are expected to live in South Carolina in 2030, compared with 485,333 people in 2000.

In 2000, South Carolina ranked 32nd in the nation for the highest percentage of people aged 65 and older. By 2030, the state is projected to rank 15th in the nation.

Objectives

- To reduce the number of traffic crashes, injuries, and fatalities involving older and/or medically impaired drivers
- To improve the roadway and driving environment to better accommodate the special needs of older and/or medically impaired drivers

The strategies to achieve the objectives listed above are located in Appendix A.

DISTRACTED OR FATIGUED DRIVER

5 – YEAR TOTAL

FATALITIES – 427 INJURIES – 2,111

The Problem

Driver distraction is perhaps one of the most challenging roadway traffic safety issues today. The driver distraction of today, however, is far different than in years past. Driver distraction traditionally was a single device or stimulus (eating, tuning a radio, other passengers). Today it has diffused due to innovative technologies such as wireless telephones, internet services, navigation devices, or sophisticated entertainment centers. These multiple and more complex distractions degrade driving performance, increase risk, and may lead to unintended consequences.

Every year, drowsy driving is responsible for at least 100,000 automobile crashes, 40,000 injuries, and 1,550 fatalities nationwide. A survey regarding drowsy driving indicated that over a third of drivers report having nodded off or fallen asleep at least once since they began driving. Eight percent have done so in the past six months.

Objectives

- To reduce the number of traffic crashes, injuries, and fatalities involving distracted and/or fatigued drivers
- To implement low cost roadway safety improvements to reduce the incidence of drowsy and/or distracted driving crashes
- To provide safe stopping rest areas
- To increase driver awareness of the risks of drowsy and/or distracted driving and promote driver focus
- To implement programs that target populations at increased risk of drowsy and distracted driving crashes

The strategies to achieve the objectives listed above are located in Appendix A.

LICENSING, AND DRIVER EDUCATION REQUIREMENTS

5 – YEAR TOTAL

FATALITIES – 51
INJURIES – 5,015

Focus: Unlicensed, Revoked, or Suspended; International Population Groups; Interchange of Licensing Information; Driver Licensing Agreement

The Problem

Although a majority of drivers obey laws and enforcement actions intended to reduce illegal driving, there are those who continue to drive without proper licensure. They include drivers whose driving privileges have been suspended or revoked and drivers who have never received a license.

Objectives

- To reduce the number of traffic crashes, injuries, and fatalities involving unlicensed, suspended, and/or revoked drivers licenses

The strategies to achieve the objective listed above are located in Appendix A.

EMPHASIS AREA III: SPECIAL VEHICLES

Three types of vehicles were of special interest in the Road Map: commercial vehicles, motorcycles, and school buses. Crashes involving these vehicles often pose increased risk of fatal or serious injuries or are high visibility crashes. Drivers of passenger vehicles contribute to crashes involving large trucks in the majority of collisions involving these vehicles; occupants of the passenger vehicles are more likely to be killed or seriously injured than the driver of the commercial vehicle, due to the size differences between the vehicles. These types of collisions also cause lengthy delays and sometimes result in secondary collisions.

Motorcycles also represent a significant crash problem in South Carolina. The state has the highest motorcycle fatality rate in the nation. Motorcycle fatalities are continuing to increase in the state; about 70+% of motorcycle riders killed in crashes were not wearing helmets. There is no requirement for motorcycle riders to have completed a motorcycle rider-training course prior to licensure.

Although there has not been an on-board school bus fatality in many years, it is critical to keep school bus safety in the forefront of the minds of drivers. This type of vehicle has been included in the Road Map in order to ensure that safety efforts in this regard are maintained. The protection of the state's children is of paramount importance.

SPECIAL VEHICLES

Targets

- Commercial Vehicles
- Motorcycles
- School Buses

A five-year total of fatalities and injuries by special vehicle is located in Table 3.

Table 3: Fatalities and Injuries by Special Vehicles 2000 – 2004*

SPECIAL VEHICLE	5 – Year TOTAL FATALITIES	5 – Year TOTAL INJURIES
Commercial Vehicles	442	989
Motorcycles	423	1,696
School Buses	16	2,135

* Crashes can involve more than one factor (e.g. speeding, impaired by alcohol or other drug); therefore, adding these numbers together will represent more than the total number of fatalities and injuries.

COMMERCIAL VEHICLES

5 – YEAR TOTAL

FATALITIES – 442 INJURIES – 989

The Problem

According to the 2004 South Carolina Commercial Motor Vehicle (CMV) Traffic Collision Fact Book, 2,842 of the 3,147 reported CMV collisions were the result of some action, or inaction by one or more of the drivers; this accounted for 90% of all primary contributing factors of crashes. "Too fast for conditions" was the greatest of these, accounting for 30.4% of CMV collisions. Vehicle factors accounted for the next largest category of collision causes with 178 or 5.7% of the total. "Tires/Wheels," "Brakes," and "Other" were the contributing factors attributed to most of the collisions in this category. CMV's seem to have a greater propensity to have vehicle malfunctions as collision factors than do passenger vehicles. For fatal collisions in 2004, some type of driver error was considered the probable cause in 89 of the 102 fatal collisions, accounting for 87.3% of all collisions in which someone was killed. This percentage is lower than the percentage for all South Carolina fatal traffic collisions (90.3% driver error).

When dealing with these collisions, it becomes necessary to know which vehicle caused the collision. In two vehicle collisions between a CMV and a Non-CMV, the Non-CMV driver was cited as the only contributor to the crashes in 1,051 of 2,073 collisions, or 51% of the time. The CMV driver was cited as the only contributor in 880 of the 2,073 collisions, or 42% of the time. Non-CMV drivers were the only contributors in 71% of all fatal crashes and 48.9% of injury collisions. CMV drivers were the only contributors in 22% of fatal collisions and 44% of injury collisions.

CMV involved collisions are responsible for hundreds of millions of dollars in economic losses to South Carolina each year. Economic losses as estimated in this publication include property damage, medical costs, and lost productivity, but do not include intangible costs such as grief and suffering. In 2004, $185 million dollars in estimated losses were incurred in CMV collisions. This was an 8.0% increase from 2003. Yet, this also means that CMV collisions made up 7.1% of the total economic loss that occurred on South Carolina roadways in 2004.

Objectives

- To reduce the number of fatal crashes involving commercial motor vehicles
- To continue efforts to educate the public on how to share the road with large trucks

The strategies to achieve the objectives listed above are located in Appendix A.

MOTORCYCLES

5 – YEAR TOTAL

FATALITIES – 423 INJURIES – 1,696

The Problem

The outcome of a crash involving a motorcycle can often be devastating. It is estimated that 20% of passenger vehicle crashes result in injury or death, while an astounding 80% of motorcycle crashes result in injury or death. South Carolina traffic crashes involving a motorcycle have increased steadily by 22%, from 1,426 in 2000 to 1,607 in 2004. Over this five-year period, 423 motorcyclists were killed and 1,696 received injuries. The state has the highest motorcycle fatality rate in the nation.

Out of the 85 motorcycle riders killed in 2004, 79 were male, 40 were under age 35, and 68 were not wearing a helmet. Out of the 2,043 riders of motorcycles who were involved in traffic collisions, 449 were wearing a helmet, 1,366 were not, and for 228 riders, helmet usage was unknown. For those cyclists under 21 years of age, the law requires helmet usage. For this group, two fatalities were wearing helmets and four fatalities were not; one fatality was unknown.

Objectives

- To reduce the number of traffic crashes, injuries, and fatalities involving motorcycles
- To promote and encourage the use of motorcycle protective equipment including helmets, boots, gloves, jackets, reflective vests, etc., by all riders
- To promote and encourage completion of motorcycle rider-training programs

The strategies to achieve the objectives listed above are located in Appendix A.

SCHOOL BUSES

5 – YEAR TOTAL

FATALITIES – 16 INJURIES – 2,135

The Problem

Several years ago, most of the state's school bus drivers were 16, 17, and 18 year-old students. The school bus drivers' training curriculum, training methodology, training aids, and materials were designed to accommodate the learning styles of this age group. After April 1, 1988, the state was mandated to discontinue using teenagers as school bus drivers. Since that time, the entire school bus driving force has been converted to an all-adult driving force and a new school bus driver's training course and training methodology had to be developed to accommodate the adult learner. In 2001 State Board of Education Regulation 43-80 was amended by adding the following mandate: "All school bus drivers, while being licensed or certified, must complete a physical performance test to demonstrate their physical ability to operate the school bus and to carry out the evacuation of students from the school bus."

According to the South Carolina Department of Education, South Carolina has the largest publicly owned school bus fleet in the United States, with 5,638 school buses in the fleet. There are 357,353 students transported daily. In South Carolina, a school bus is the safest form of transportation, safer even than walking. The majority of fatalities that are school bus related are to persons in vehicles other than the school bus. There has been one on-board fatality in the last 25 years.

Objectives

- To reduce the number traffic crashes, injuries, and fatalities involving school buses

- To educate the motoring public on the proper procedures on stopping for and passing school buses

The strategies to achieve the objectives listed above are located in Appendix A.

EMPHASIS AREA IV: VULNERABLE ROADWAY USERS

Pedestrians and two wheel vehicle operators alike need to understand that they have primary responsibility for their own safety. The motoring public also has a responsibility to share the road in a safe manner with these vulnerable road users.

As expected, when a pedestrian or a two-wheel vehicle operator is involved in a traffic crash, the potential for harm is much greater among these vulnerable road users.

Vulnerable Roadway User

Targets

- Pedestrians
- Bicyclists

Table 4 displays a five-year total of deaths and injuries by vulnerable road user category.

PEDESTRIANS

5 – YEAR TOTAL

FATALITIES – 455 INJURIES - 957

The Problem

Between 2000 and 2004, there were 455 pedestrians killed in a traffic crash. This means that almost 9% of all the fatalities in 2004 were pedestrians. In 2004, there were 86 pedestrians killed, which is more than 8% of all fatalities in the same year. This represents 9.1% of all pedestrians involved in traffic crashes during the year, a proportion more than 15 times greater than for automobiles.

Objectives

- To reduce the number of traffic crashes, injuries, and fatalities involving pedestrians
- To reduce vehicle speed
- To improve pedestrian and motorist safety awareness and behavior
- To provide additional facilities for pedestrians as feasible

The strategies to achieve the objectives listed above are located in Appendix A.

Table 4: Fatalities and Injuries by Vulnerable Roadway Users 2000 – 2004*

Vulnerable Roadway Users	5 – Year TOTAL FATALITIES	5 – Year TOTAL INJURIES
Pedestrians	455	957
Bicyclists	102	352

* Crashes can involve more than one factor (e.g. speeding, impaired by alcohol or other drug); therefore, adding these numbers together will represent more than the total number of fatalities and injuries.

BICYCLISTS

5 – YEAR TOTAL

FATALITIES – 102 INJURIES - 352

The Problem

Between 2000 and 2004, bicycles accounted for 102 fatalities and 352 injuries. One bicyclist is killed every 17.4 days in South Carolina. A total of 1.7% of the traffic collisions involves bicycles.

Objectives

- To reduce the number of traffic crashes, injuries, and fatalities that involves bicyclists
- To educate motorists and cyclists on how to share the road safely
- To provide adequate facilities for bicyclists as feasible

The strategies to achieve the objectives listed above are located in Appendix A.

EMPHASIS AREA V: MANAGEMENT INFORMATION AND EXCHANGE

Management Information and Exchange

Successful implementation of the four previous emphasis areas is impacted by having adequate information and data upon which to base decisions and to evaluate countermeasures applied. There must also be effective communications strategies to share messages with the public, as well as to communicate internally among the safety partners. The development and implementation of appropriate public policy and new and/or strengthened safety legislation will also impact the overall success of the Road Map in achieving fatality and injury reduction goals.

Targets

- Communications Strategies
- Data Systems and Analysis Methods
- Public Policy and Legislative Strategies

Communication Strategies

The Problem

Many agencies are strategic partners in promoting highway safety. Stakeholder agencies often pursue their own highway safety communication strategies tied to the specific mission of their organization. Consequently, the state as a whole does not always send common messages regarding highway safety initiatives, nor do we currently take advantage of partnering opportunities to leverage communications resources.

Objectives

- To enhance and expand existing communication formats among safety partners
- To enhance and track the performance of the Strategic Highway Safety Plan through institutionalizing regular communication sessions among stakeholder groups

The strategies to achieve the objectives listed above are listed in Appendix A.

Data Systems and Analysis

The Problem

The key to developing and monitoring meaningful performance measures lies in the accurate capturing and sharing of data. That data is extracted from disparate systems that often do not interface with each other. Each stakeholder agency captures and reports different pieces of the highway safety puzzle. Problem driver information needs to be shared

not just among SC stakeholder agencies, but also among U.S. jurisdictions, to effectively reduce the number of problem drivers on the road. Road inventory data can be extremely useful when linked with crash records. EMS data and hospital discharge data provide valuable information to determine the effectiveness of laws related to occupant protection and to assess economic impact and cost benefit of various countermeasures.

Effective sharing of the entire data management process, input, transmission, and reporting can assist the member agencies in developing meaningful measures that can guide the strategic direction of limited resources. There is a basic need to reference the physical location of the collision site and expand the state's capability to collect traffic collision data in a more timely and efficient manner, as well as to link the data with that from other stakeholders in a manner that is readily available to all the partners.

Global Positioning System methods are now available to determine with greater accuracy locations for highway safety improvements. Also, tools such as the Interactive Highway Safety Design Module, Safety Analyst, and other similar tools have been developed through the National Cooperative Highway Research Program and FHWA for use by states to assist in identifying high crash locations and in prioritizing limited dollars for safety improvements. There is a need to implement the use of these tools, and to provide appropriate personnel with the necessary training and equipment to utilize these advanced statistical methods.

Objectives

- To focus attention on partnering opportunities and sharing of available data among agencies and jurisdictions
- To implement an automated traffic collision data system linked to road inventory data that will reduce data collection time and improve the accuracy of collision location reporting
- To improve the dissemination and availability of crash and other data related to safety management, including EMS data, hospital discharge data, adjudication data, driver and vehicle data through the development of data cubes
- To implement new approaches, statistical methods, and tools as necessary to identify locations of promise for safety improvements and to prioritize projects for safety improvements

The strategies to achieve the objectives listed above can be found in Appendix A.

Public Policy and Legislative Strategies

The Problem

All stakeholder agencies share the same objective in improving highway safety. Many of the strategies included in this strategic plan involve changes on the legislative and policy level. Through the development of joint legislative and policy initiatives, stakeholder agencies can present a unified theme to promote laws and develop public policy aimed at reducing problem drivers, improving road

safety, and tightening licensing requirements when appropriate.

Objectives

- To establish a stakeholder group to advance new safety legislation as needed and appropriate

The strategies to achieve the objective listed above are included in Appendix A.

IMPLEMENTATION AND EVALUATION

Implentation of the Road Map

After developing and approving the Road Map, the real work begins: implementation. As essential as the collaborative process was in the development of the Road Map, it is critical for the collaborative process to be sustained and expanded in the implementation phase. Though the South Carolina Department of Transportation, in cooperation with the Federal Highway Administration, the South Carolina Department of Public Safety, and other safety partners will lead the charge to implement the Road Map, the document is intended to provide a guiding direction for all of the State's safety partners in addressing key highway safety issues and aligning highway safety efforts. Attention to the Road Map will not end after the initial development phase. Follow-through in implementing the Road Map will make the real difference and impact on South Carolina's fatality rate and whether the State will meet its safety goals.

The implementation of South Carolina's Road Map will be achieved through three different mediums:

- Implementing existing safety plans and programs;
- Implementing emphasis area action plans; and
- Linking with the Transportation Planning Process.

Implementing the Road Map Through Existing Safety Plans and Programs

A multitude of funding sources should be used to implement both the infrastructure and behavioral strategies and programs agreed upon in the Road Map, including funding sources associated with Federal Motor Carrier Safety Administration (FMCSA), National Highway Traffic Safety Administration (NHTSA), and Federal Highway Administration (FHWA). Safety projects are eligible for a multitude of funding sources including but not limited to: NHS, STP, and IM funding; the strategies and projects included in the annual Motor Carrier Safety Assistance Program (MCSAP) Commercial Vehicle Safety Plan (CVSP) (per 49 CFR 350); the State Section 402 Highway Safety Plan and Annual Performance Plan (HSP) (per 23 CFR 1200); and the Highway Safety Improvement Program (HSIP) (per 23 CFR 924). Metropolitan and statewide long-range transportation plans will be considered and appropriately included in implementing the Road Map. (For a more extensive list of sources, please refer to Appendix B)

As the implementation process of the Road Map evolves and the collaborative efforts of the safety partners become institutionalized, the recommendations from the Road Map will influence the priorities in the above mentioned plans. The Road Map is not intended to replace these plans. The benefit of the over-arching nature of the Road Map is that it is the result of a collaborative effort. Current safety plans and processes like those mentioned in this section

will remain stand-alone planning documents for existing safety programs.

Implementation of the Road Map goes beyond Federal grant programs and planning processes. Each safety partner involved agrees that the emphasis areas and strategies outlined in the Road Map are the best way to collectively reduce fatalities and serious injuries in the State of South Carolina. Safety partners will implement the Road Map to the extent of their institutional capabilities. The priorities set forth in the Road Map and detailed in the emphasis area action plans will guide the safety related activities.

Implementing the Road Map Through Emphasis Area Action Plans

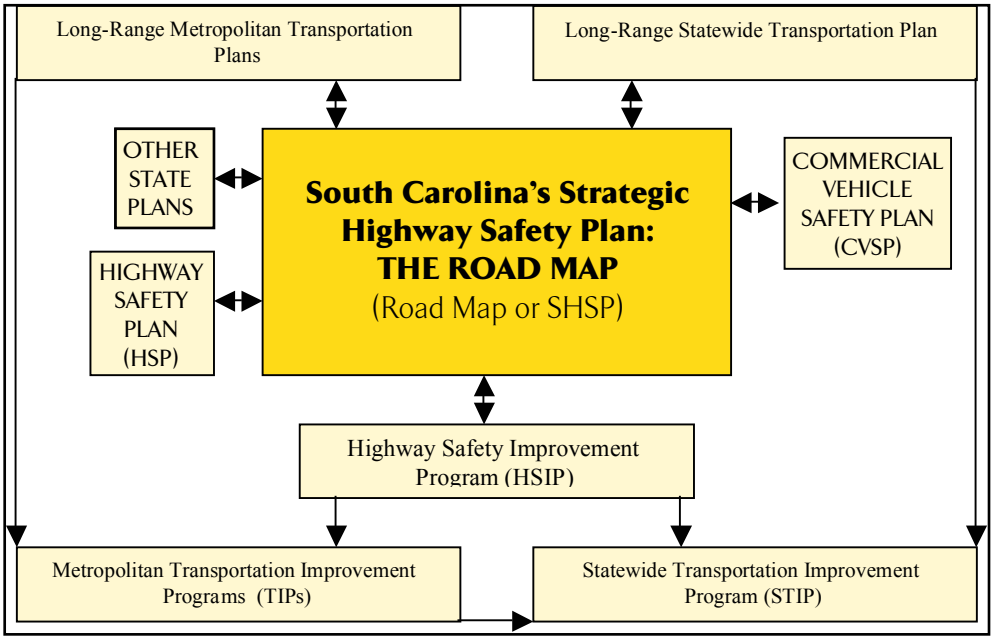
Many States have developed action plans based on the emphasis areas outlined in their SHSP by expanding on the supporting data and strategies. Details in action plans describe the why, what, how, when, where, and who. Action plans also provide specifics such as performance measures, funding, and contain some project level detail. The plans also include evaluation criteria for assessing the success of the implemented safety strategies.

Action plans will be developed with multi-agency involvement for each of the Emphasis Areas. The South Carolina Department of Transportation, FHWA, and South Carolina Department of Public Safety will host a second Forum in 2007 to promote a closer working relationship among key players in highway safety and those involved in the planning process. Representation is needed from all the "E's" of safety, including engineering, enforcement, education, EMS, and economic incentives. Participation is also needed from Metropolitan Planning Organizations (MPOs), the Councils of Government (COGs), and planners from the various "E's" of safety. The involvement of the aforementioned groups will insure the success of the second Forum and provide a starting point for emphasis area action plan development and discussion. As the Road Map and action plans are being implemented, it is important to recognize the need for agencies and organizations to coordinate efforts and provide reinforcements to each other's efforts. In addition to holding a second forum, the SCDOT will develop a website and an e-newsletter for the Road Map in an effort to keep all partners abreast of the latest information and developments.

Linking the Road Map with the Transportation Planning Process

The Road Map shares similar goals with the transportation planning process: to increase State and local decision makers' awareness of safety needs, to improve the effectiveness of planning and programming through the use of accurate and timely data, and to expand the participation of major State and local stakeholders. State DOTs and MPOs should consider safety as a factor in the transportation planning process. Incorporating the appropriate elements of the Road Map throughout the stages of the transportation planning process will give the Road Map higher visibility and greater understanding among stakeholders, elected and appointed officials, and the public. It ensures that the appropriate Road Map initiatives are incorporated into the planning and policy documents of State DOTs and MPOs (i.e. transportation plans and corridor plans), into the program of projects in the Transportation Improvement Programs/ Statewide Transportation Improvement Programs (TIPs/STIPs), and are eligible for Federal-aid transportation funding.

A program of infrastructure projects, or specific infrastructure projects, that directly support and implement the Road Map will be included in the STIP for Federal-aid



transportation funding eligibility. The projects that are intended to be included in the STIP will meet all requirements of 23 U.S.C. 135 (g) Statewide Transportation Improvement Program. The STIP will include a specific description of how the contents of the STIP reflect the priorities and goals in the SHSP. MPOs will continue to develop strategies to incorporate safety in their transportation planning process and TIP development. The MPOs' safety goals should address regional safety issues, but the results of the MPO safety planning process should, as appropriate, be consistent with and reflect the goals and objectives of the State's Road Map. SCDOT will conduct special outreach efforts to both MPOs and Councils of Government (COGs) to provide traffic crash information specific to their geographic region that may be used in their planning process. SCDOT Safety Staff will provide technical assistance as needed by these groups in the process of safety program development and planning.

It is important to note, however, that the transportation planning process (i.e. transportation plan, TIP, and STIP) applies only to Federal-aid highway and transit programs. Other plans such as the CVSP and the 402 HSP remain stand-alone planning documents; however, the Road Map should be coordinated with these plans as well.

South Carolina's Road Map will be implemented through existing safety plans, action plans, and through the transportation planning process. All safety partners will implement the SHSP to the extent that each agency or organization is capable. Implementation can occur at all levels of government from state to local to tribal and partners are encouraged to consider how SHSP strategies can be included as they integrate safety activities into their own organizational plans. Implementation by all safety partners is the only way to make the SHSP goals a reality.

Evaluating and Updating the Road Map

To facilitate better decision-making regarding allocation of resources and to

track progress and determine the impacts of various strategies over time, the State of South Carolina will establish an evaluation process and revisit the Road Map on a regular basis. The Working Group will meet periodically to review the Road Map, examine progress toward goals, and suggest changes or modifications if needed. The leadership of participating safety partners will be briefed periodically on the activities of the Working Group, the effectiveness of the plan, and recommendations for modifications.

The following are evaluations and update requirements from SAFETEA-LU and recommendations from FHWA's SHSP Guidance that South Carolina will uphold during the evaluation and update process:

- SAFETEA-LU requires States to evaluate the plan on a regular basis to ensure the accuracy of the data and priority of proposed improvements. According to the Highway Safety Improvement Program (HSIP) reporting requirements (23 U.S.C. § 148(g)), each State shall submit an HSIP report to the FHWA Division Administrator on an annual basis. Because of this yearly reporting requirement, it is expected that after an initial implementation period States will evaluate the SHSP on an annual basis to ensure the accuracy of the data, priority of proposed improvements, and effectiveness of the projects and plan. This evaluation should not be limited to just HSIP related projects and strategies, but as a best practice should include all projects and strategies regardless of the funding source or agency responsible for the implementation.
- SAFETEA-LU requires States to use the evaluation information in setting priorities for highway safety improvement projects. The performance-based elements in the SHSP should help States determine the effectiveness of highway safety improvement projects in reducing the number of highway fatalities and serious injuries on all public roads. The findings resulting from the evaluation process shall be incorporated as basic source data when revisiting priorities included in the SHSP. This will help determine how emphasis areas and strategies will be revised.
- SAFETEA-LU requires each State to establish an evaluation process to analyze and assess results achieved by highway safety improvement projects carried out in accordance with procedures and criteria established in 23 U.S.C. § 148. Evaluation of the SHSP should include a process for determining the effect that highway safety improvement projects have in reducing the number of fatalities and serious injuries, including:
  - The cost of the safety countermeasures implemented, and the safety benefits resulting from the countermeasures.
  - A record of crash experience before and after the implementation of a strategy.
  - A comparison of crash numbers, rates, and severity observed after the implementation of a strategy with the crash numbers, rates, and severity expected had the strategy not been implemented.

The impact of the Road Map will also be evaluated through both impact and process evaluation. Ultimately, the key measure will be the reduction in the number of fatalities and injuries, as well as, reaching the 2010 statewide fatality reduction goal.

In addition, several process issues will be monitored and/or measured:

- The increase in the amount of funding for safety projects
- The increase in the amount of highway miles with shoulder rumble strips
- The increase in the amount of highway miles with edgeline rumble strips
- The increase in the amount of highway miles with centerline rumble strips
- The increase in the amount of highway miles with new, expanded, or enhanced shoulders
- The increase in the number of sobriety checkpoints
- The increase in the number of agencies participating in enhanced enforcement efforts
- The increase in the number of tickets written for high risk driving behaviors
- Increase in the safety belt usage rate on South Carolina highways
- Passage of a motorcycle helmet law
- Improvement of existing safety laws
- The decrease in the number of fatalities and injuries to individuals under 21
- Improvement in the DUI law and conviction rate
- Development and deployment of a statewide alcohol education program
- Increase in the number of breath alcohol ignition interlocks installed
- The use of new statistical tools for data analysis
- The increase in the amount of highway miles of expanded or adequate clear zones

As South Carolina regularly re-examines data, evaluates the effectiveness of countermeasures and strategies, and monitors progress in accomplishing goals, the State will need to determine if any elements of the Road Map should be updated or revised. The Road Map will be revised periodically, so that the plan reflects updated safety goals and priorities in the State. An update of the Road Map will also be a way to renew the momentum, coordination, and cooperation needed to continue to achieve reductions in highway fatalities and serious injuries on all public roads. When the Road Map is revised, it will follow a process consistent with SAFETEA-LU requirements as outlined in FHWA's SHSP Guidance.

PROPOSED FUNDING

As previously stated, SAFETEA-LU has placed an unprecedented amount of emphasis on the safety of the nation's transportation systems. While emphasis will draw more attention to these issues, the implementation of the strategies outlined in this document will depend upon the availability of resources.

SAFETEA-LU not only created new requirements, but it also created some new and reauthorized old funding sources. While some of these sources require grant applications on individual projects, most are annual programmatic apportionments. As such, most of these sources are currently dedicated to other areas of SCDOT program, and a policy change from the Commission would be required to redirect some of these resources toward the support of the Road Map. This type of reprioritization is something all of the Partner agencies will review.

The current implementation of some of those program areas is beneficial not only for the original purpose of the project, but also provide a secondary safety benefit as well. For example, the Congestion Mitigation Air Quality

program funds congestion relief strategies and traffic flow improvements, including operational improvements to intersections like turn lanes. These types of projects are beneficial for safety reasons as well, because they also reduce the number of crashes at intersections, effectively addressing multiple problems within one program.

SAFETEA-LU also places increased emphasis on the Metropolitan Planning Organizations (MPOs) requiring "safety" and "security" be considered as planning factors during the development of long and short-range planning documents. These MPOs have discretionary funding available to them on an annual basis known as "Guideshare" funds, which could be used for safety projects. SCDOT plans to work with the MPOs to educate them on the safety issues in their unique areas, in an effort to provide the relevant information needed to make tough prioritization decisions.

The tables located in Appendix B outline potential federal funding opportunities for the strategies outlined in the Road Map.

CONCLUSIONS

Shared responsibility and partnerships are critical elements in meeting the fatality reduction goal. Increased communication, coordination, and cooperation between key state, regional, and local agencies; safety organizations; and safety advocates must guide the implementation and deployment of the strategies outlined in the Road Map.

While the Road Map addresses numerous emphasis areas and targets, there are eight essential strategies South Carolina must implement for significant progress to be made in reaching 784 or fewer fatalities by 2010. These eight key strategies involve contributions from the engineering, enforcement, education, EMS, and public policy areas and were determined through extensive data analysis and a review of current research and best practices. These are identified as the "Essential Eight."

Essential Eight

- Collaborating with Other Agencies to Maintain, Support, and Improve Existing Safety and Licensing Legislation
- Effectively Deterring, Identifying, Arresting, and Adjudicating Alcohol and Other Drug Impaired Drivers and Pedestrians
- Expanding, Improving, and Maintaining Roadway Clear Zones and Visibility Features (i.e. markings, signs, lighting, etc.)
- Expanding the Installation of Shoulder, Edgeline, and Centerline Rumble Strips and Protective Barriers, and the Use of Wider, Paved Shoulders
- Improving Communications Strategies
- Improving Current Data Systems and Analysis Methods
- Increasing Enforcement and Public Information and Education on Traffic Safety Issues
- Increasing Occupant Restraint Usage

In order to achieve the maximum reduction in fatalities and injuries and to make the most efficient use of available resources, available data should be carefully analyzed to strategically identify specific locations or corridors where certain treatments should have priority deployment. Policies should be reviewed to ensure that, where appropriate, treatments are implemented system wide.

NEXT STEPS

The South Carolina Department of Transportation, the South Carolina Department of Public Safety, the Federal Highway Administration, and other safety partners as appropriate will lead the development of an implementation plan to effectively deploy the strategies outlined in the Road Map. The implementation plan will include the formation of an Evaluation Committee to conduct the annual evaluation of the Road Map as required by federal law; an Annual Review Group, to determine if any updates or changes are needed in the Road Map; and a team to plan the second Forum. Emphasis area groups will be formed at the second Forum to build Emphasis Area Action Plans, utilizing a template developed by FHWA for intersection improvements or other similar tools.

Following the official signing and approval of the Road Map by both the Executive Director of SCDOT and the Governor's Representative for Highway Safety, along with the official approval of the document by FHWA, SCDOT will distribute the Road Map to the safety partners across the state for their use in improving safety and will release the Road Map to the public.

This is a working document that will be updated in 2007, and then will move to a five-year schedule for updates, with the first year of the five-year period beginning in 2008.

Appendix A

Emphasis Area Strategies for the Four "E's"

Emphasis Area I - Serious Crash Types					
	Engineering	**Enforcement**	**Education**	**EMS**	**Public Policy and Other**
Animals in Roadway	▪ Continue signing at problem locations. ▪ Expand and maintain roadway visibility features at targeted locations. ▪ Utilize wildlife passages when design allows. ▪ Implement roadside vegetation management. ▪ Install fencing. ▪ Install roadway lighting where feasible.		▪ Work with the Department of Natural Resources and the media to inform the public of recent findings from a recently completed study on deer-related crashes, as well as publishing safety tips during key migration periods.		▪ Establish policies for planting materials that do not attract deer. ▪ Maintain clear zone policy.

Emphasis Area I - Serious Crash Types					
	Engineering	**Enforcement**	**Education**	**EMS**	**Public Policy and Other**
Head-On	▪ Install centerline rumble strips and/or profiled thermoplastic strips for centerlines. ▪ Provide wider cross sections on two lane roads. ▪ Provide center two-way left-turn lanes for four- and two-lane roads. ▪ Reallocate total two-lane roadway width (lane and shoulder) to include a narrow "buffer median". ▪ Deploy median three strand cable or equivalent barriers.. ▪ Deploy as appropriate, passing lanes on rural two lane roads or implement Super 2 designs. ▪ Install/widen medians.. ▪ Implement a Pilot 2 + 1 design on selected corridor. ▪ Conduct Road Safety Audits to identify safety concerns. ▪ Continue implementation of the CRISOS program.	▪ Implement aggressive enforcement of vehicle passing regulations. ▪ Increase visibility in high crash/risk area.	▪ Provide continuing education to motorists on laws/signs/markings related to passing zones as well as how to avoid head-on crashes.	▪ Improve response times in rural areas. ▪ Implement NEMSIS to monitor data of this crash type.	▪ Implement stricter laws and penalties related to passing.

Emphasis Area I - Serious Crash Types					
	Engineering	**Enforcement**	**Education**	**EMS**	**Public Policy and Other**
Horizontal Curves	▪ Provide advance warning of unexpected changes in horizontal alignment. ▪ Enhance delineation along the curve. ▪ Provide adequate sight distance. ▪ Install shoulder rumble strips. ▪ Install centerline rumble strips. ▪ Prevent edge drop-offs. ▪ Provide skid-resistant pavement surfaces. ▪ Provide dynamic curve warning system. ▪ Widen the roadway. ▪ Improve or restore super elevation. ▪ Modify horizontal alignment. ▪ Install automated anti-icing systems. ▪ Prohibit/restrict trucks with very long semi-trailers on roads with horizontal curves that cannot accommodate truck off-tracking. ▪ Design safer slopes and ditches to prevent rollovers. ▪ Remove/relocate objects in hazardous locations. ▪ Delineate roadside objects. ▪ Add or improve roadside hardware. ▪ Improve design and application of barrier and attenuation systems. ▪ Expand and maintain roadway visibility features at targeted locations. ▪ Conduct Road Safety Audits to identify safety concerns.	▪ Implement high visibility, aggressive enforcement in identified high crash/risk areas.	▪ Educate motorists on the need to obey posted speed limits to negotiate curves.		

Intersection Crashes (Unsignalized/Signalized)

Emphasis Area I - Serious Crash Types

Engineering	Enforcement	Education	EMS	Public Policy and Other
▪ Provide offset left-turn lanes at intersections. ▪ Provide right-turn lanes at intersections. ▪ Close or relocate "high-risk" intersections. ▪ Realign intersection approaches to reduce or eliminate intersection skew. ▪ Improve pedestrian and bicycle facilities to reduce conflicts between motorists and non-motorists. ▪ Clear sight triangles on stop- or yield-controlled approaches to intersections. ▪ Clear sight triangles in the medians of divided highways near intersections. ▪ Retime adjacent signals to create gaps at stop-controlled intersections. ▪ Improve visibility of intersections by providing enhanced signing and delineation. ▪ Provide a stop bar (or provide a wider stop bar) on minor road approaches. ▪ Install larger regulatory and warning signs at intersections. ▪ Install flashing beacons at stop-controlled intersections. ▪ Provide traffic calming on intersection approaches through geometric and traffic control devices. ▪ Post appropriate speed limit on intersection approaches. ▪ Provide turn path markings. ▪ Restrict access to properties using driveway closures or restrictions. ▪ Restrict cross-median access near intersections. ▪ Improve drainage in intersection and on approaches. ▪ Provide skid resistance in intersection and on approaches. ▪ Relocate signal hardware out of clear zone. ▪ Restrict or eliminate parking on intersection approaches. ▪ Upgrade signal identification to assist officers in enforcing red light violations in targeted areas. ▪ Install rumble strips at high-speed stop controlled intersections. ▪ Utilize proper planning and design of access to public roadways. ▪ Utilize innovative design techniques, such as roundabouts, in targeted areas. ▪ Check signal timing at intersections with high incidence of RLR.	▪ Provide targeted conventional enforcement of traffic laws to include speed enforcement, reducing stop sign violations, and red light running. ▪ Increase visibility in high crash areas. ▪ Increase enforcement of intersection violations, e.g. red light running, regulatory sign. ▪ Develop a procedure for law enforcement officers to request engineering assessments of crash sites. ▪ Conduct high visibility, aggressive enforcement in identified high crash/risk areas. ▪ Implement three enforcement projects to reduce RLR in cities with the highest incidence of RLR. ▪ Target problem intersections.	▪ Provide targeted public information and education on safety problems at specific intersections. ▪ Continue annual observance of Red Light Running Prevention Awareness Week. ▪ Continue SCDOT's Take the Pledge Program.		▪ Enact legislation to allow red light running cameras/automated enforcement. ▪ Implement automated enforcement of red-light running (cameras). ▪ Implement automated enforcement of approach speeds (cameras).

Emphasis Area I - Serious Crash Types					
	Engineering	**Enforcement**	**Education**	**EMS**	**Public Policy and Other**
Railgrade Crossings	▪ Coordinate closely spaced signals near at-grade railroad crossings. ▪ Eliminate and/or consolidate crossings. ▪ Enhance warning signs/signals at selected railgrade crossings in targeted areas. ▪ Install signalized gate crossings at targeted rail crossings.	▪ Implement railroad grade crossing requirements under Motor Carrier Safety Improvement Act (MCSIA). ▪ Increased visibility/aggressive enforcement in high crash/risk area. ▪ Implement and/or enhance high visibility, selective traffic enforcement program efforts at high incident locations. ▪ Coordinate the "Trooper on the Train" Program with Operation Lifesaver and the media.	▪ Support Operation Lifesaver.	▪ Improve response times in rural areas. ▪ Implement NEMSIS.	▪ Secure passage of Automated enforcement legislation at rail grade crossings. ▪ Investigate use of signs with Radio Frequency Identification (RFID) chips that can capture gate violation data. ▪ Enact and implement Driver's License Agreement (DLA) to enforce "one driver, one license, one state" rule and to enhance reciprocity in transfer of violations and suspensions among states. ▪ Implement Motor Carrier Safety Improvement Act (MCSIA) to ensure proper recording and transfer of violations and disqualifications for commercial drivers among states. ▪ Implement interface with SC Courts to transmit dispositions of violations electronically.

Emphasis Area I - Serious Crash Types					
	Engineering	**Enforcement**	**Education**	**EMS**	**Public Policy and Other**
Roadside Clear Zone – Trees and Poles	▪ Develop, Revise, and Implement Planting Guidelines to Prevent Placing Trees in Hazardous Locations. ▪ Develop and implement Mowing and Vegetation Control Guidelines. ▪ Remove Trees in Hazardous Locations. ▪ Shield Motorists from Striking Trees. ▪ Modify Roadside Clear Zone in the Vicinity of Trees. ▪ Delineate Trees in Hazardous Locations. ▪ Remove poles in hazardous locations. ▪ Relocate poles in hazardous locations further from the roadway or to a less vulnerable location. ▪ Use breakaway poles. ▪ Shield drivers from poles in hazardous locations. ▪ Improve the drivers' ability to see poles in hazardous locations. ▪ Apply traffic calming measures to reduce speeds on high-risk sections. ▪ Develop, revise, and implement policies to prevent placing or replacing poles with the recovery area. ▪ Place utilities underground. ▪ Decrease the number of poles along the corridor. ▪ Conduct Road Safety Audits to identify safety concerns.				▪ Develop an internal clear zone policy.

Emphasis Area I - Serious Crash Types					
	Engineering	**Enforcement**	**Education**	**EMS**	**Public Policy and Other**
Railgrade Crossings	▪ Coordinate closely spaced signals near at-grade railroad crossings. ▪ Eliminate and/or consolidate crossings. ▪ Enhance warning signs/signals at selected railgrade crossings in targeted areas. ▪ Install signalized gate crossings at targeted rail crossings.	▪ Implement railroad grade crossing requirements under Motor Carrier Safety Improvement Act (MCSIA). ▪ Increased visibility/aggressive enforcement in high crash/risk area. ▪ Implement and/or enhance high visibility, selective traffic enforcement program efforts at high incident locations. ▪ Coordinate the "Trooper on the Train" Program with Operation Lifesaver and the media.	▪ Support Operation Lifesaver.	▪ Improve response times in rural areas. ▪ Implement NEMSIS.	▪ Secure passage of Automated enforcement legislation at rail grade crossings. ▪ Investigate use of signs with Radio Frequency Identification (RFID) chips that can capture gate violation data. ▪ Enact and implement Driver's License Agreement (DLA) to enforce "one driver, one license, one state" rule and to enhance reciprocity in transfer of violations and suspensions among states. ▪ Implement Motor Carrier Safety Improvement Act (MCSIA) to ensure proper recording and transfer of violations and disqualifications for commercial drivers among states. ▪ Implement interface with SC Courts to transmit dispositions of violations electronically.

Emphasis Area I - Serious Crash Types					
	Engineering	**Enforcement**	**Education**	**EMS**	**Public Policy and Other**
Roadside Clear Zone – Trees and Poles	▪ Develop, Revise, and Implement Planting Guidelines to Prevent Placing Trees in Hazardous Locations. ▪ Develop and implement Mowing and Vegetation Control Guidelines. ▪ Remove Trees in Hazardous Locations. ▪ Shield Motorists from Striking Trees. ▪ Modify Roadside Clear Zone in the Vicinity of Trees. ▪ Delineate Trees in Hazardous Locations. ▪ Remove poles in hazardous locations. ▪ Relocate poles in hazardous locations further from the roadway or to a less vulnerable location. ▪ Use breakaway poles. ▪ Shield drivers from poles in hazardous locations. ▪ Improve the drivers' ability to see poles in hazardous locations. ▪ Apply traffic calming measures to reduce speeds on high-risk sections. ▪ Develop, revise, and implement policies to prevent placing or replacing poles with the recovery area. ▪ Place utilities underground. ▪ Decrease the number of poles along the corridor. ▪ Conduct Road Safety Audits to identify safety concerns.				▪ Develop an internal clear zone policy.

Emphasis Area I - Serious Crash Types					
	Engineering	**Enforcement**	**Education**	**EMS**	**Public Policy and Other**
Run-Off the Road	▪ Provide improved highway geometry for horizontal curves. ▪ Provide enhance pavement markings. ▪ Eliminate shoulder drop-offs. ▪ Design safer slopes and ditches to prevent rollovers. ▪ Delineate trees or utility poles. ▪ Improve design of roadside hardware. ▪ Improve design and application of barrier and attenuation systems. ▪ Reduces water flow from side roads and large developments. ▪ Create a database of problem locations. ▪ Maintain and/or install median barriers. ▪ Expand and maintain roadway visibility features at targeted locations. ▪ Deploy centerline, edgeline, and shoulder rumble strips. ▪ Continue the implementation of the CRISOS program to add and improve shoulders where possible and cost effective. ▪ Remove/relocate objects in clear zone. ▪ Widen/pave shoulders on all state-maintained highways. ▪ Apply skid resistant pavement. ▪ Eliminate pavement edge drop-offs. ▪ Continue expansion of Inflation Station program with Michelin, to eventually include both welcome centers and rest areas. ▪ Conduct Road Safety Audits to identify safety concerns. ▪ Implement use of the “Safety Wedge.”	▪ Increase speed and DUI enforcement on rural roads with a high percentage of ROR crashes. ▪ Coordinate CRISOS road enforcement activities with Law Enforcement Networks and provide mini-grants for participating groups. ▪ Conduct briefings with law enforcement agencies with CRISOS roads in their jurisdiction.	▪ Educate roadway users on proper recovery once vehicle leaves the roadway. ▪ Continue Safety Rest Break Program with safety partners prior to designated holidays. ▪ Develop educational exhibit/simulation to teach drivers recovery strategies. ▪ Continue SCDOT’s Take the Pledge Program. ▪ Continue to educate drivers about how to drive on wet or icy pavement.	▪ Expand EMS services in rural areas where response time is greater than ten minutes. ▪ Conduct briefings with EMS units with CRISOS roads in their jurisdiction. ▪ Implement the National Emergency Management Services Information System (NEMIS) in South Carolina to collect EMS data related to this crash type.	▪ Determine internal policy for Resurface, Restoration, and Rehabilitation projects, directing levels of improvement in pavement width, shoulder width and type, and roadside clearing and barrier installation. ▪ Determine shoulder standards for all statewide significant corridors.

Emphasis Area I - Serious Crash Types					
	Engineering	**Enforcement**	**Education**	**EMS**	**Public Policy and Other**
Secondary on Interstate	▪ Support aggressive incident management strategies with all responders. ▪ Improve communications among responders and with the public. ▪ Establish acceptable detour routes.	▪ Provide enhanced incident management. ▪ Establish acceptable detour routes..	▪ Increase awareness of quick clearance law. ▪ Publish and distribute Steer It/Clear It Brochure and video. ▪ Train emergency responders on proper work zone set-up, including use of PPE, and provide kits to all interstate responders containing emergency work zone set-up supplies.	▪ Expedite emergency response; particularly in rural areas.	▪ Clarify incident scene control.

Emphasis Area I - Serious Crash Types

Work Zone				
Engineering	**Enforcement**	**Education**	**EMS**	**Public Policy and Other**
▪ Improve operation of maintenance and construction work zones. ▪ Utilize full-time roadway closure for construction operations where feasible. ▪ Utilize time-related contract provisions. ▪ Use nighttime roadwork. ▪ Use demand management programs to reduce volumes through work zones. ▪ Design future work zone capacity into new or reconstructed highways. ▪ Implement ITS strategies to improve safety. ▪ Improve visibility of work zone traffic control devices. ▪ Improve visibility of work zone personnel and vehicles. ▪ Reduce flaggers' exposure to traffic. ▪ Establish work zone design guidance. ▪ Implement measures to reduce work space intrusions (and limit consequences of intrusions). ▪ Improve work zone safety for pedestrians, bicyclists, motorcyclists, and heavy-truck drivers. ▪ Minimize the impact to the motorist due to work zones. ▪ Continue and expand the Work Zone training program to meet the requirements of the Rule on Work Zone Safety and Mobility. ▪ Conduct statewide safety training on the use of Internal Traffic Control Plans and require their use on all significant projects. ▪ Conduct semi-annual meetings with safety personnel, contractors, utilities, and municipalities to discuss safety concerns and strategies to resolve. ▪ Conduct periodic inspections of work zones to determine compliance with MUTCD and safety standards. ▪ Develop and implement Traffic Control Management Plans for all significant projects. ▪ Fully implement the Rule on Work Zone Safety and Mobility.	▪ Continue SIT (Safety Improvement Team) program. ▪ Increase visibility in high crash areas. ▪ Expand speed enforcement in work zones. ▪ Continue annual blitz enforcement waves. ▪ Continue liaison with Law Enforcement Networks (LEN's) to coordinate blitz waves; provide mini-grants to LEN's involved in blitz activities. ▪ Provide training to Law Enforcement on the new FHWA course "Safe and Effective Use of Law Enforcement Personnel in Work Zones."	▪ Continue the Let'em Work, Let'em Live campaign. ▪ Implement previously developed work zone safety training program, including the Cruiser's curriculum, for young drivers in counties with the highest frequencies of work zone crashes. ▪ Conduct annual observance of Work Zone Safety Awareness Week. ▪ Develop appropriate, project-specific educational outreach, utilizing a variety of approaches to keep motorists informed. ▪ Conduct educational presentations/exhibits on work zone safety. ▪ Add an enhanced section to the Driver's Manual on Work Zone Safety.	▪ Provide training to EMS and other 1st Responders on establishing an emergency work zone.	▪ Develop and implement an agency policy consistent with the new federal rule on Work Zone Safety (WZ) and Mobility as require by federal law. ▪ Establish consistent PPE requirements for all highway workers in accordance with the new Rule. ▪ Implement a certification program for all flaggers and work zone supervisors.

Emphasis Area II – High Risk Drivers					
	Engineering	**Enforcement**	**Education**	**EMS**	**Public Policy and Other**
Aggressive Driver	▪ Change or mitigate the effects of identified elements in the environment. ▪ Reduce nonrecurring delays and provide better information about these delays. ▪ Implement program similar to Colorado and in coordination with SCHP, with signs and telephone numbers to report aggressive drivers. ▪ Implement corridor safety program. ▪ Conduct FHWA Speed Management Workshop.	▪ Target enforcement. ▪ Conduct enhanced speed enforcement in Work Zones.	▪ Conduct educational and public information campaigns. ▪ Educate and impose sanctions against repeat offenders. ▪ Conduct educational campaign for roads designated as safety corridors. ▪ Implement educational outreach campaign proposed by FAST in counties with the highest speed-related fatalities. ▪ Conduct annual observance of "Put the Brakes on Fatalities Day". ▪ Continue SCDOT's Take the Pledge Program.	▪ Work with EMS PIER group to provide materials and education to public. ▪ Implement NEMSIS to collect data on these types of crashes.	▪ Educate and impose sanctions against repeat offenders. ▪ Secure passage of universal helmet law. ▪ Enact legislation, which clearly defines aggressive driving and penalties for violations. ▪ Enact legislation and implement Driver's License Agreement (DLA) to enhance reciprocity in transfer of violations and suspensions among states. ▪ Implement Motor Carrier Safety Improvement Act (MCSIA) to ensure proper recording and transfer of violations and disqualifications for commercial drivers among states. ▪ Implement interface with SC Courts to transmit dispositions of violations electronically. ▪ Pass legislation to establish safety corridors. ▪ Establish a multi-agency Speed Management Team to coordinate efforts to set appropriate speed limits. ▪ Enact legislation to allow for pilot project in automated enforcement on selected corridors.

Emphasis Area II – High Risk Drivers					
	Engineering	**Enforcement**	**Education**	**EMS**	**Public Policy and Other**
Distracted or Fatigued Driver	▪ Install shoulder, edgeline, and/or centerline rumble strips and rumble stripes. ▪ Implement other roadway improvements to reduce the likelihood and severity of run-off-road and/or head-on collisions. ▪ Implement roadway improvements to reduce the likelihood and severity of other types of distracted and drowsy driving crashes. ▪ Improve access to safe stopping and resting areas. ▪ Improve rest area security and services. ▪ Explore possibility of rest stop electrification.	▪ Enhance enforcement of commercial motor vehicle hours-of-service regulations.	▪ Conduct education and awareness campaigns targeting the general driving public. ▪ Visibly enforce existing statutes to deter distracted and drowsy driving. ▪ Encourage trucking companies and other fleet operators to implement fatigue management programs. ▪ Incorporate information on distracted and fatigued driving into education programs and materials for young drivers. ▪ Encourage employers to offer fatigue management programs to employees working nighttime or rotating shifts. ▪ Continue SCDOT's Take the Pledge Program.		▪ Strengthen graduated driver licensing requirements for young novice drivers. ▪ Consider public and corporate policies regulating cell phone use and other electronic devices. ▪ Expand available parking in rest areas. ▪ Enact legislation outlawing the use of (handheld) cell phones when driving.

Emphasis Area II – High Risk Drivers

Impaired by Alcohol or Other Drugs

Engineering	Enforcement	Education	EMS	Public Policy and Other
▪ Provide 2-feet paved shoulders throughout highway system. ▪ Install shoulder, edgeline, and centerline rumble strips and stripes. ▪ Enhance pavement markings and delineation of curves. ▪ Implement clear zone policies. ▪ Remove roadside obstacles where feasible and guard obstacles where not feasible. ▪ Eliminate pavement edge drop-off by using the "Safety Wedge."	▪ Conduct Regular Well-Publicized DUI Checkpoints. ▪ Publicize and Enforce Zero Tolerance Laws for Drivers Under Age 21. ▪ Seize Vehicles or Vehicle License Plates Administratively Upon Arrest. ▪ Incarcerate Offenders. ▪ Increase the number of sobriety checkpoints. ▪ Further encourage cooperation between regional safety partners to identify target locations , times, etc. for enforcement. ▪ Support Drug Recognition Expert (DRE) programs. ▪ Conduct aggressive/increased enforcement targeting impaired drivers at high crash/risk areas. ▪ Utilize a multi-agency approach to checkpoints. ▪ Continue support of national, regional, and state DUI enforcement and public information and education campaigns. ▪ Continue statewide-sustained DUI enforcement campaigns. ▪ Train all law enforcement officers in SFST (Standard Field Sobriety Tests). ▪ Equip all traffic enforcement vehicles with in-car video cameras. ▪ Enhance BAT (Breath Alcohol Testing) mobile program. ▪ Increase enforcement of underage sales to minors.	▪ Conduct educational and public information campaigns. ▪ Educate and impose sanctions against repeat offenders. ▪ Develop and implement a statewide alcohol education and enforcement program. ▪ Continue to educate the general public, business owners, and alcohol servers on the dangers of impaired driving. ▪ Continue support of national, regional, and state DUI public information and educational campaigns. ▪ Publicize prosecution and/or enforcement sting results of underage drinking/underage sales to minors. ▪ Educate parents about liability of social hosting through campaigns. ▪ Implement the Cruiser curriculum statewide. ▪ Educate the public on how alcohol impairs driving skills. ▪ Educate the public on how alcohol impairs driving skills. ▪ Educate the public on the adjudication process of DUI (i.e. 1st offense in lower courts; 2nd and higher in circuit court). ▪ Provide training to judiciary on signs and symptoms; societal cost of DUI.	▪ Implement NEMSIS to track response to DUI crashes. ▪ Continue educational outreach efforts through PIER and ENCARE.	▪ Suspend driver's license administratively upon arrest. ▪ Establish stronger penalties for BAC test refusal than for test failure. ▪ Screen all convicted DUI offenders for alcohol problems and require treatment when appropriate. ▪ Require Ignition Interlocks as a Condition for License Reinstatement. ▪ Require Responsible Beverage Service Policies for Alcohol Servers and Retailers. ▪ Employ Screening and Brief Interventions in Health Care Settings. ▪ Make participation in DUI Tracking System mandatory. ▪ Improve the DUI process and conviction rate. ▪ Develop and Implement "Free Ride Home:" programs around target populations. ▪ Utilize portable testing equipment. ▪ Continue State's Impaired Driving Prevention Council to address enforcement, educational, and legislative issues regarding DUI and recommendations stemming from the State's 2003 Impaired Driving Assessment. ▪ Introduce bill to strengthen current DUI laws/penalties and eliminate loopholes. ▪ Eliminate practice of officers having to prosecute their own DUI cases. ▪ Enact legislation and implement Driver's License Agreement (DLA) to enhance reciprocity in transfer of violations and suspensions among states. ▪ Implement Motor Carrier Safety Improvement Act (MCSIA) to ensure proper recording and transfer of violations and disqualifications for commercial drivers among states. ▪ Implement interface with SC Courts to transmit dispositions of violations electronically. ▪ Enact legislation strengthening penalties for repeat sales to minors. ▪ Establish DUI courts.

Emphasis Area II – High Risk Drivers					
	Engineering	**Enforcement**	**Education**	**EMS**	**Public Policy and Other**
Licensing and Driver Education Requirements	▪ Provide alternative transportation options. ▪ Continue to improve the mass transit system.	▪ Routinely link citations to driver record. ▪ Impound license plate. ▪ Immobilize/impound/seize vehicle. ▪ Incarcerate offenders. ▪ Increase safety checkpoints in high-risk areas.	▪ Conduct public awareness campaign for low/limited English proficiency populations. ▪ Develop "Parents of Teen Drivers" campaign to help parents teach their teens about good driving habits. ▪ Implement FHWA's "Read the Road Program" and other similar materials.		▪ Install ignition interlock device (IID). ▪ Develop an unlicensed, revoked, or suspended driver identification list or "hot sheet" for distribution to local law enforcement. ▪ Consider public policy or administrative rules to identify and/or restrict the unlicensed, revoked, or suspended driver, (e.g., impound vehicles or license plate, increase sanctions, etc.). ▪ Mandate suspended drivers retake driver's license exam/road test. ▪ Enact and implement an interchange of licensing information among jurisdictions. ▪ Implement Motor Carrier Safety Improvement Act (MCSIA) to ensure proper recording and transfer of violations and disqualifications for commercial drivers among states. ▪ Implement interface with SC Courts to transmit dispositions of violations electronically.

Emphasis Area II – High Risk Drivers

Occupant Protection Devices – Nonuse or Misuse

Engineering	Enforcement	Education	EMS	Public Policy and Other
▪ Use changeable message boards and signs during stepped-up occupant protection enforcement campaigns (e.g., Buckle Up, South Carolina). ▪ Utilize electronic message signs to post monthly usage rates in key urban areas. ▪ Provide buckle-up signs for parking lots of schools and government facilities.	▪ Conduct highly publicized enforcement campaigns to maximize restraint use. ▪ Aggressively enforce the primary child safety seat law. ▪ Aggressively enforce the primary occupant protection law. ▪ Continue support of national, regional, and state occupant protection enforcement and public information and education campaigns (e.g., Buckle Up South Carolina, Child Passenger Safety Week, etc.).	▪ Provide enhanced public education to population groups with lower than average restraint use rates. ▪ Educate motorists, with an emphasis on minority and rural populations and other low use groups, on the state's new primary safety belt law. ▪ Provide community locations for instruction in proper child restraint use, including both public safety agencies and health care providers that are almost always available. ▪ Conduct high profile "child restraint inspection" events at multiple community locations. ▪ Train law enforcement personnel to check for proper child restraint use in all motorist encounters. ▪ Increase number of CPS Fitting Stations and trained CDP Technicians. ▪ Create state-level clearinghouses for materials that offer guidance in implementing programs to increase restraint use. ▪ Educate parents, caregivers, and grandparents about proper selection and installation of child safety seats and booster seats. ▪ Continue to expand public information and education campaigns to education the general public and target groups about the importance of occupant protection. ▪ Establish a partnership between SCDMV and SCDPS to develop and deliver public information on the use of seatbelts. ▪ Continue SCDOT's Take the Pledge Program. ▪ Implement the Safety Belt Honor Roll Program for businesses and industries in accordance with previously signed agreement between SCDPS and SCDOT. ▪ Implement the Cruiser curriculum statewide. ▪ After the second Forum, examine the need for stronger safety belt legislation.		▪ Increase emphasis on special occupant protection mobilizations (public information and education campaigns). ▪ Upgrade child restraint law to meet federal requirements of SAFETEA-LU.

Emphasis Area II – High Risk Drivers					
	Engineering	**Enforcement**	**Education**	**EMS**	**Public Policy and Other**
Older Drivers – 65 or Older and /or Medically Impaired	▪ Provide advance warning signs. ▪ Provide advance-guide and street name signs. ▪ Increase the size and letter height of roadway signs. ▪ Provide all-red clearance intervals at signalized intersections. ▪ Provide more protected left turn signal phases at high-volume intersections. ▪ Provide offset left-turn lanes at intersections. ▪ Improve lighting at intersections, horizontal curves, and railroad grade crossings. ▪ Improve roadway delineation. ▪ Reduce intersection skew angle. ▪ Improve traffic control at work zones. ▪ Expand and maintain roadway visibility features. ▪ Enhance signs/markings. ▪ Provide/increase availability of transportation options for seniors, including transit.		▪ Increase seat belt usage by older drivers and passengers. ▪ Educate older drivers and their family and friends about the risks associated with certain prescription drugs and physical conditions. ▪ Develop “senior safety” program with AARP. ▪ Support endowed Chair at Clemson in gerontology and traffic safety. ▪ Establish centers for skill assessment and enhancement. ▪ Promote participation in 55 Alive and similar programs. ▪ Educate older drivers using FHWA’s “Read the Road Program: and similar materials.	▪ Implement NEMSIS to monitor older driver involvement.	▪ Encourage external reporting of at-risk drivers to licensing authorities. ▪ Provide remedial assistance to help functionally impaired older drivers lower their crash risk. ▪ Partner to promote resource centers within communities to promote safe mobility choices. ▪ Provide educational and training opportunities to the general older driver population. ▪ Investigate enhanced driver license testing procedures. ▪ Implement Older Driver Highway Design Handbook. ▪ Enact and implement an interchange of licensing information among jurisdictions.

Emphasis Area II – High Risk Drivers

Young Drivers – Less Than 21

Engineering	Enforcement	Education	EMS	Public Policy and Other
▪ Establish regional skid pads for use by driver education classes to teach car control techniques.	▪ Implement strict enforcement of GDL Law (e.g., curfew, safety belt, etc.). ▪ Expand enforcement targeting young drivers. ▪ Enforce zero tolerance policies for underage drinking and drug use. ▪ Conduct safety checkpoints in high-risk areas. ▪ Increase sting operations for underage sales to minors.	▪ Implement public awareness campaign for parents/guardians regarding their role in developing safe/responsible drivers. ▪ Enhance Families of Highway Fatalities program. ▪ Develop "Parents of Teen Drivers" campaign to help parents teach their teens about good driving habits. ▪ Implement social hosting campaign "Parents Who Host Lose the Most". ▪ Publicize results of underage enforcement operations as deterrent. ▪ Implement the Cruiser curriculum statewide. ▪ Educate young drivers using FHWA's "Read the Road Program" and similar materials.	▪ Continue educational presentations and mock crashes to educate young drivers on crash consequences.	▪ Amend GDL Law to include passenger restriction, curfew, provisional licensing, required driver's educations, and supervised driving hours. ▪ Increase penalties for underage drinking. ▪ Enact legislation and implement Driver's License Agreement (DLA) to enhance reciprocity in transfer of violations and suspensions among states. ▪ Implement interface with SC Courts to transmit dispositions of violations electronically. ▪ Increase penalties for repeat underage sales to minors. ▪ Increase manpower resources for underage enforcement. ▪ Coordinate with the SC Driver Education Association , School Districts, SC Department of Education, and the SC Legislature to secure funding for a Comprehensive Driver Education Program with an updated curriculum that includes car control techniques.

Emphasis Area III – Special Vehicles					
	Engineering	**Enforcement**	**Education**	**EMS**	**Public Policy and Other**
Commercial Vehicles	▪ Increase efficiency of use of existing parking spaces. ▪ Create additional parking spaces. ▪ Incorporate rumble strips into new and existing roadways. ▪ Install interactive truck rollover signing . ▪ Modify speed limits. ▪ Identify high crash corridors and initiate appropriate engineering interventions. ▪ When designing or redesigning statewide corridor facilities, give special consideration to freight movements. ▪ Pursue, enhance, and utilize mode alternatives for freight. ▪ Continue truck lane restrictions. ▪ Explore truck speed limits.	▪ Increase fraud detection by state and third-party testers. ▪ Modify speed limits and increase enforcement to reduce truck and other vehicle speeds. ▪ Identify high crash corridors and initiate appropriate enforcement interventions. ▪ Implement aggressive identification of carriers with unsafe safety practices, (e.g. hours of service, size and weight, drug and alcohol, unqualified drivers, etc). ▪ Target traffic enforcement of CMVs on high crash routes. ▪ Concentrate on major contributing factors such as speed, improper lane changes, and failure to yield right oof way. ▪ Perform enforcement activities to remove impaired CMV drivers from the highways and ensure ready roadside access to alcohol detection and measuring equipment.	▪ Incorporate Share the Road information into driver materials. ▪ Promulgate Share the Road information through print and electronic media. ▪ Offer commercial vehicle fatigue management program.		▪ Improve test administration for the CDL. ▪ Increase the timeliness, accuracy, and completeness of truck safety data. ▪ Implement the integrated commercial data collection and analysis system. ▪ Pursue legislation to prevent triple trailers. ▪ Implement Motor Carrier Safety Improvement Act (MCSIA) to ensure proper recording and transfer of violations and disqualifications for commercial drivers among states. ▪ Implement interface with SC Courts to transmit dispositions of CDL and CMV violations electronically. ▪ Perform activities aimed at providing training to MCSAP personnel to recognize impaired drivers.

Emphasis Area III – Special Vehicles

Motorcycles

Engineering	Enforcement	Education	EMS	Public Policy and Other
	▪ Disallow continued (back to back) use of provisional motorcycle license. ▪ Conduct aggressive enforcement of helmet law for persons under 21 years of age. ▪ Conduct aggressive enforcement/visibility in high crash/risk areas.	▪ Expand Motorcycle Rider Education Program. ▪ Increase the number of programs to discourage drinking and biking, (e.g. Ride Straight Program). ▪ Educate roadway users on motorcycle performance, visibility, etc. ▪ Enhance educational efforts during State's annual motorcycle rallies. ▪ Develop and publish separate motorcycle manual geared specifically to motorcycle riders. ▪ Includes motorcycle awareness as part of a regular driver's manual.		▪ Prohibit the sale of helmets that fail to meet FMVSS 218 performance requirements. ▪ Secure passage of a universal helmet law. ▪ Introduce separate general road knowledge test for all drivers that includes motorcycle awareness questions. ▪ Enhance motorcycle knowledge test to contain more motorcycle-specific questions. ▪ Ensure that all motorcycle instruction regulated by SCDMV meet Motorcycle Safety Foundation Standards. ▪ Partner to introduce legislation increasing requirements to obtain beginner's permit and limit the number of times a permit can be renewed. ▪ Enact legislation requiring satisfactory completion of a certified Motorcycle Rider Education Program prior to licensing.

Emphasis Area III – Special Vehicles

School Buses

Engineering	Enforcement	Education	EMS	Public Policy and Other
.	▪ Enforce stop arm and signal violations	▪ Educate roadway users about school bus regulations		

Emphasis Area IV– Vulnerable Roadway Users					
	Engineering	**Enforcement**	**Education**	**EMS**	**Public Policy and Other**
Bicyclists	▪ Consider bike lanes, mobility, and safety needs during the needs assessment of all projects. ▪ Implement separate paths for bicycles where feasible.	▪ Increase the enforcement of bicycle laws. ▪ Conduct aggressive enforcement /visibility in high crash/risk areas.	▪ Increase bicycle safety education programs in elementary schools. ▪ Educate roadway users on bicycle visibility, performance, etc. ▪ Include information in general driver's manual on bicycle awareness. ▪ Conduct bicycle rodeos statewide; provide helmets for distribution. ▪ Continue dissemination of A - Z Bike Book as well reflective materials for use by cyclists, through SCDOT Cares, Palmetto Cycling, safety fairs, etc. ▪ Educate law enforcement officers on laws related to safe cycling. ▪ Implement the Cruisers curriculum in schools statewide. ▪ Expand, update, and continue distribution of a "Parent's Guide to Traffic Safety."		▪ Encourage the passage of a mandatory bicycle helmet law. ▪ Increase bicycle helmet distribution programs.

Emphasis Area IV– Vulnerable Roadway Users					
	Engineering	**Enforcement**	**Education**	**EMS**	**Public Policy and Other**
Pedestrians	▪ Implement Road Narrowing Measures. ▪ Install Traffic Calming – Road Sections. ▪ Install Traffic Calming – Intersections. ▪ Provide School Route Improvements. ▪ Improve lighting in selected urban areas. ▪ Improve pedestrian signs, signals, and road markings. ▪ Consider pedestrian safety and mobility during the needs assessment of all projects. ▪ Implement SR2S program and outreach initiatives. ▪ Enhance intersection and roadway design to be more pedestrian friendly. ▪ Install separated paths/sidewalks. ▪ Install high visibility crosswalks. ▪ Install pedestrian traffic signal countdown heads. ▪ Build median refuges.	▪ Implement Enforcement Campaigns. ▪ Conduct aggressive enforcement of pedestrian laws. ▪ Coordinate special enforcement efforts with Safe Routes to School Programs on a local and district level.	▪ Provide Education, Outreach and Training. ▪ Implement an awareness campaign emphasizing the risks to pedestrians on high volume/speed roadways resulting from disabled vehicle, motorist assist, crossing multi-lanes, etc. ▪ Include information in general driver's manual on pedestrian awareness. ▪ Conduct Pedestrian Road Shows, exhibits, etc. ▪ Promote the use of appropriately reflective materials. ▪ Publish the results of recent Clemson/SCDOT study on pedestrian visibility through both electronic and print media. ▪ Conduct annual "Walk Your Child to School Day" observance. ▪ Conduct annual "Bike to Work" observance. ▪ Expand, update, and continue distribution of a "Parent's Guide to Traffic Safety." ▪ Implement Safe Routes to School Program educational outreach on safe walking/biking routes and tips.		▪ Increase state financial contributions to pedestrian facilities.

Emphasis Area V– Management Information and Exchange					
	Engineering	**Enforcement**	**Education**	**EMS**	**Public Policy and Other**
Communication Strategies	.		▪ Develop joint highway safety education programs whenever feasible. ▪ Establish a website to publicize the SHSP and an e-newsletter to keep partners up-to-date on status of goal accomplishment. ▪ Convene a second Forum with all safety partners to update the SHSP. ▪ Implement an educational outreach program to MPOs and COG to provide customized presentations on their unique safety problems.		

Emphasis Area V– Management Information and Exchange					
	Engineering	**Enforcement**	**Education**	**EMS**	**Public Policy and Other**
Data Systems and Analysis	▪ Improve location coding for all rural roads and residential streets. ▪ Improve query abilities on existing systems. ▪ Pursue and complete the integration of crash data into ITMS so it can be graphically represented for statewide, regional and metropolitan planning purposes. ▪ Implement a continuously operating help desk to accommodate law enforcement personnel in crash reporting. ▪ Implement electronic data capture. ▪ Refine and expand automated GPS Collision location captures. ▪ Implement a project to append road inventory data to each crash record.	▪ Improve the quality and timeliness of crash data. ▪ Continue rollout phase of SCCATTS (South Carolina Collision and Ticket Tracking System)/ ▪ Develop system capabilities to share violation and suspension information among jurisdictions according to DLA Standards. ▪ Implement all system requirements for MCSIA. ▪ Implement electronic interface with SC court for transmission of CDL and CMV violations.		▪ Implement NEMSIS	▪ Create new Traffic Records Coordinating Committee to review all crash databases and identify strategies for integration. ▪ Ensure all systems developed are compliant with both MMUCC and MIRE. ▪ Utilize IHSDM, Safety Analyst, and other new tools as prescribed in the NHI course on "New Approaches to Highway Safety Analysis" to develop priority listings for safety infrastructure improvement projects. ▪ Complete cost benefit analysis of all safety programs/projects. ▪ Implement community-based traffic safety teams in Columbia, Charleston, Florence, Horry and Spartanburg.

Emphasis Area V– Management Information and Exchange					
	Engineering	Enforcement	Education	EMS	Public Policy and Other
Public Policy and Legislative Strategies	.				▪ Develop joint legislative group among stakeholder agencies to co-sponsor legislation aimed at improving safety.

Appendix B

SAFTEA-LU Funding Initiatives

Name of the Program	Purpose	Notes	Eligible Uses	Match Requirements	Statutory Reference
CONGESTION MITICATION AND AIR QUALITY (CMAQ) IMPROVEMENT PROGRAM	The purpose of the CMAQ program is to fund transportation projects or programs that will contribute to attainment or maintenance of the national ambient air quality standards	In States where the amount of CMAQ funds generated due to nonattainment or maintenance area is less than the minimum apportionment levels, as is the case in South Carolina, additional flexibility is granted under the law allowing a State to transfer minimum apportionment of CMAQ funds to several other program areas including the Highway Safety Improvement Program	▪ Establish or operate advanced electrification systems ▪ Pedestrian/bicycles off-road or on-road facilities ▪ Involve the purchase of integrated, interoperable emergency communications equipment ▪ Travel demand management ▪ Traffic management /monitoring/congestion relief strategies ▪ Project development activities for new services and programs with air quality benefits	The Federal share is generally 80 percent, subject to sliding scale and 90 percent for Interstate projects. Certain other activities, including carpool/vanpool projects, priority control systems for emergency vehicles and transit vehicles and traffic control signalization receive a Federal share of 100 percent.	SAFETEA-LU Section(s) 1101(a)(5), 1103(d), 1808
IDLING REDUCTION FACILITIES IN INTERSTATE RIGHTS-OF-WAY	This provision allows States to provide facilities in Interstate System rights-of-way that allow operators of commercial vehicle to reduce truck idling or provide alternative power to support driver comfort while parked in a rest or recreation area.	The idling reduction facilities may not reduce the existing number of truck parking spaces at a given rest or recreation area. States may charge a fee, or permit charging of a fee, for parking spaces actively providing idling reduction measures.	▪ Allows the establishment or operation of advanced electrification systems in Interstate System rights-of-way.	No funding associated with provision	SAFETEA-LU Section: 1412
HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)	The purpose of this program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads.	Each State must have an SHSP to be eligible to use up to 10 percent of its HSIP funds for other safety projects under 23 USC (including education, enforcement and emergency medical services). It must also certify that it has met its railway-highway crossing and infrastructure safety needs.	▪ Funds may be used for projects on any public road or publicly owned bicycle and pedestrian pathway or trail.	The Federal share is 90 percent, subject to the sliding scale adjustment, except that the Federal share is 100% for certain safety improvements listed in 23 USC 120©*.	SAFETEA-LU Section(s): 1101(a)(6), 1401
NATIONAL HIGHWAY SYSTEM (NHS) PROGRAM	This program provides funding for improvements to rural and urban roads that are part of the NHS, including the Interstate System and designated connections to major intermodal terminals.	--------	▪ Operational improvements for segments of the NHS ▪ Highway safety improvements for segments of the NHS ▪ Fringe and corridor parking facilities ▪ Infrastructure-based intelligent transportation systems capital improvements ▪ Development and establishment of management systems under 23 U.S.C. 303	The Federal share is generally 80 percent	SAFETEA-LU Section(s): 1101(a)(2), 1103, 6006
NATIONAL SCENIC BYWAYS PROGRAM	This program recognizes roads having outstanding scenic, historic, cultural, natural, recreational, and archaeological qualities and provides for designation of these roads as National Scenic Byways, All-American Roads or America's Byways	Passing lanes are not an eligible use of funds	▪ Safety improvements to accommodate increased traffic; improvements that enhance access; protection of resources adjacent to the byway. ▪ Development and provision of tourist implementation; and construction of bicycle and pedestrian facilities, interpretive facilities, overlooks and other enhancements for byway travelers.	The Federal share remains at 80 percent.	SAFETEA-LU Section(s): 1101(a)(12), 1802
RAILWAY-HIGHWAY CROSSINGS	To reduce the number of fatalities and injuries at public highway-rail grade crossings through the elimination of hazards and/or the installation/upgrade of protective devices at crossings.	Each State is required to conduct and systematically maintain a survey of all highways to identify those railroad crossings that may require separation, relocation, or protective devices, and establish and implement a schedule of projects for this purpose. A railroad participating in a hazard elimination project is responsible for compensating the State transportation department for the net benefit to the railroad of the project.	▪ The separation or protection of grades at crossings ▪ The reconstruction of existing railroad grade crossing structures, ▪ The relocation of highways to eliminate grade crossings ▪ Any other hazard elimination projects	The Federal share is 90 percent.	SAFETEA-LU Section(s): 1401

Name of the Program	Purpose	Notes	Eligible Uses	Match Requirements	Statutory Reference
REAL-TIME SYSTEM MANAGEMENT INFORMATION PROGRAM	To provide the capability to monitor, in realtime, the traffic and travel conditions of the major highways of the United States and to share that information to improve surface transportation system security, address congestion, improve response to weather events and surface transportation incidents, and to facilitate national and regional highway traveler information.	No separate funds are authorized for this program. States may use their National Highway System, Congestion Mitigation and Air Quality Improvement program, and Surface Transportation program apportionments for activities related to the planning and deployment of real-time monitoring elements that advance the goals of the program to the extent that such activities are eligible for funding under the source program.	--------	--------	SAFETEA-LU Section(s): 1201
RECREATIONAL TRAILS PROGRAM	The Recreational Trails program provides funds to the States to develop and maintain recreational trails and trail-related facilities for both nonmotorized and motorized recreational trail uses.	Funds are available to develop, construct, maintain, and rehabilitate trails and trail facilities. Trail uses include hiking, bicycling, in-line skating, equestrian use, cross-country skiing, snowmobiling, off-road motorcycling, all-terrain vehicle riding, four-wheel driving, or using other off-road motorized vehicles.	▪ Development and rehabilitation of trailside and trailhead facilities ▪ Construction of new trails (with some limits on Federal lands) ▪ Acquisition of easements and fee simple title to property ▪ Development and dissemination of publications and operation of trail safety and trail environmental protection programs (including non-law enforcement monitoring and patrol programs and trail-related training), not to exceed 5% of the annual apportionment	The Federal share is 80 percent. Recreational Trails program funds may be used to match other Federal program funds for purposes that would be eligible under the Recreational Trails program.	SAFETEA-LU Section(s): 1101(a)(8), 1109
SAFE ROUTES TO SCHOOL PROGRAM	To enable and encourage children, including those with disabilities, to walk and bicycle to school; to make walking and bicycling to school safe and more appealing; and to facilitate the planning, development and implementation of projects that will improve safety, and reduce traffic, fuel consumption, and air pollution in the vicinity of schools.	Each State must set aside from its Safe Routes to School apportionment not less than 10 percent and not more than 30 percent of the funds for noninfrastructure-related activities to encourage walking and bicycling to school.	▪ Infrastructure improvements can include: sidewalk improvements, traffic calming and speed reduction improvements, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, secure bike parking, and traffic diversion improvements in the vicinity of schools ▪ Non-infrastructure improvements include: public awareness campaigns and outreach to press and community leaders, traffic education and enforcement in the vicinity of schools, student sessions on bicycle and pedestrian safety, health, and environment, and training, volunteers, and managers of safe routes to school programs.	The Federal share is 100 percent.	SAFETEA-LU Section(s): 1101(a)(17), 1404
SURFACE TRANSPORTATION PROGRAM (STP)	The Surface Transportation Program provides flexible funding that may be used by States and localities for projects on any Federal-aid highway, including the NHS, bridge projects on any public road, transit capital projects, and intracity and intercity bus terminals and facilities.	This eligibility also extends to the MPOs Guideshare funding	▪ Construction, reconstruction, rehabilitation, resurfacing, restoration, and operational improvements for highways including Interstate highways and bridges ▪ Fringe and corridor parking facilities and programs, bicycle and pedestrian facilities (off-road or on-road, including modification of walkways) on any public roads in accordance with 23 U.S.C. 217 and the modification of public sidewalks to comply with the Americans with Disabilities Act of 1990. ▪ Highway and transit safety infrastructure improvements and programs, hazard eliminations, projects to mitigate hazards caused by wildlife, and railway-highway grade crossings ▪ Capital and operating costs for traffic monitoring, management, and control facilities and program ▪ Infrastructure based intelligent transportation systems capital improvements	The Federal share is generally 80 percent	SAFETEA-LU Section(s): 1101(a)(4), 1103(f), 1113, 1603, 1960, 6006

Name of the Program	Purpose	Notes	Eligible Uses	Match Requirements	Statutory Reference
TRANSPORTATION ENHANCEMENT PROGRAM	To strengthen the cultural, aesthetic, and environmental aspects of the Nation's intermodal transportation system.	A State's TE funding is derived from a set aside from its annual Surface Transportation Program apportionment.	▪ Provision of facilities for pedestrians and bicycles (off-road or on-road facilities, including modification of existing public sidewalks to comply with the requirements of the Americans with Disabilities Act) ▪ Provision of safety and educational activities for pedestrians and bicyclists	The Federal share is 80 percent	SAFETEA-LU Section(s): 1113, 1122, 6003
TRUCK PARKING FACILITIES	The Truck Parking Facilities program is a pilot program that provides funding to address the shortage of long-term parking for commercial vehicles on the National Highway System.	States, metropolitan planning organizations (MPOs), and local governments are eligible recipients of program funds. To receive funds, a State, MPO or local government must submit an application. Funding priority will be given to applicants that: demonstrate a severe shortage of commercial vehicle parking in the corridor; have consulted with affected State and local governments, community groups, providers of commercial vehicle parking, and motorist and trucking organizations; demonstrate that their proposed projects are likely to have positive effects on highway safety, traffic congestion or air quality	▪ Constructing safety rest areas that include commercial vehicle parking ▪ Constructing commercial vehicle parking facilities adjacent to commercial truck stops and travel plazas ▪ Opening existing facilities to commercial vehicles ▪ Promoting the availability of publicly or privately provided commercial vehicle parking on the NHS using ITS systems and other means ▪ Constructing turnouts for commercial vehicles ▪ Making capital improvements to public commercial vehicle parking facilities to allow year-round use ▪ Improve the geometric design of interchanges to improve access to parking facilities	The Federal share is generally 80 percent, subject to the sliding scale adjustment. Certain safety improvements listed in 23 USC 120(c) have a Federal share of 100 percent.	SAFETEA-LU Section: 1305
WORK ZONE SAFETY PROVISIONS	Under the Work Zone Safety Grants program, the Secretary will make grants to nonprofit and not-for-profit organizations to provide training to prevent and reduce work zone injuries and fatalities.	--------	▪ Construction worker training to prevent injuries and fatalities ▪ Development of guidelines to prevent work zone injuries and fatalities ▪ Training for State and local governments, transportation agencies, and other groups implementing these guidelines	Federal share is 80 percent	SAFETEA-LU Section: 1409

**23USC120(c) = Increased Federal Share for Certain Safety Projects. - The Federal share payable on account of any project for traffic control signalization, safety rest areas, pavement marking, commuter carpooling and vanpooling, rail-highway crossing closure, or installation of traffic signs, traffic lights, guardrails, impact attenuators, concrete barrier endtreatments, breakaway utility poles, or priority control systems for emergency vehicles at signalized intersections may amount to 100 percent of the cost of construction of such projects; except that not more than 10 percent of all sums apportioned for all the Federal-aid systems for any fiscal year in accordance with section 104 of this title shall be used under this subsection. In this subsection, the term "safety rest area" means an area where motor vehicle operators can park their vehicles and rest, where food, fuel, and lodging services are not available, and that is located on a segment of highway with respect to which the Secretary determines there is a shortage of public and private areas at which motor vehicle operators can park their vehicles and rest.*

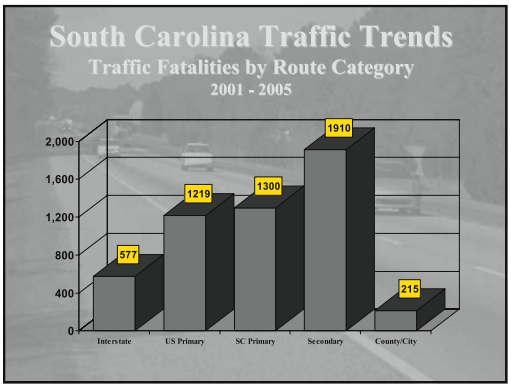
SAFETEA-LU FUNDING						
Name of the Program	**Purpose**	**Notes**	**Eligible Uses**	**Match Requirements**	**Statutory Reference**	**Administering State Agency**
MOTORCYCLIST SAFETY GRANTS	Incentive grants to encourage States to adopt and implement effective programs to reduce the number of single and multi-vehicle crashes involving motorcyclists.	A State may use these grants funds only for motorcyclist safety training and motorcyclist awareness programs, including improvement of training curricula, delivery of training, recruitment or retention of motorcyclist safety instructors, and public awareness and outreach programs.	▪ Beginning FY 2006, a State is eligible for an incentive grant by meeting one criterion in the first fiscal year in which a State receives a grant and two of the following six criteria in subsequent fiscal years: ▪ An effective Motorcycle Rider Training Course offered statewide. ▪ A statewide Motorcyclists Awareness Program to enhance motorists awareness of the presence of motorcyclists on or near roadway and safe driving practices that avoid injuries to motorcyclists. ▪ A Reduction of Fatalities and Crashes Involving Motorcycles in the preceding year. ▪ A statewide Impaired Driving Program to reduce impaired driving, including specific measures to reduce impaired motorcycle operation. ▪ A Reduction of Fatalities and Accidents Involving Alcohol or Drug Impaired Motorcyclists for the preceding year. ▪ Use of all Fees Collected From Motorcyclists for motorcycle training and safety programs.	Match requirements not provided.	SAFETEA-LU Section(s): 2010	South Carolina Department of Public Safety
STATE AND COMMUNITY HIGHWAY SAFETY GRANTS	Formula grant program (Section 402 of chapter 4 of Title 23) to support State highway safety programs, designed to reduce traffic crashes and resulting deaths, injuries, and property damage.	A state may use these grant funds only for highway safety purposes; at least 40 percent of these funds are to be expended by political subdivisions of the State.	▪ A State is eligible for these formula grants by submitting a Performance Plan, which establishes goals and performance measures to improve highway safety in the State, and a Highway Safety Plan, which describes activities to achieve those goals. Requires assurances from States that they will implement activities in support of national highway safety goals, including national law enforcement mobilizations; sustained enforcement of statutes addressing impaired driving, occupant protection, and speed; annual safety belt use surveys; and development of timely and effective statewide data systems.	Match requirements not provided.	SAFETEA-LU Section(s): 402, 2001, 2002	South Carolina Department of Public Safety
OCCUPANT PROTECTION INCENTIVE GRANTS	To encourage States to adopt and implement effective programs to reduce deaths and injuries from riding unrestrained or improperly restrained in motor vehicles.	A State may use these grant funds only to implement and enforce occupant protection programs. No State may receive a grant under this section in more than 6 years beginning in FY 2004.	A State is eligible for an incentive grant by adopting or demonstrating that it has implemented at least 4 of the following 6 criteria: ▪ Safety Belt Use Law applying to passengers in any seat in the vehicle. ▪ A safety belt law providing for Primary Enforcement. ▪ Minimum Fines or Penalty Points for safety belt and child safety seat use law violations. ▪ A statewide Special Traffic Enforcement Program (STEP) for occupant protection that emphasizes publicity. ▪ A statewide Child Passenger Protection Program that includes education programs about proper seating positions for children in air bag equipped motor vehicles and instruction on how to reduce the improper use of child restraint systems. ▪ A Child Passenger Protection Law that requires minors to be properly secured in a child safety seat or other appropriate restraint system.	The Federal share of programs funded under this section shall not exceed 75 percent in the first and second years beginning in FY 2004 in which a State receives a grant, 50 percent in the third and fourth years in which a State receives a grant, and 25 percent in each of the fifth and sixth years in which a State receives a grant.	SAFETEA-LU Section(s): 405, 2004	South Carolina Department of Public Safety
SAFETY BELT PERFORMANCE GRANTS	To encourage the enactment and enforcement of laws requiring the use of safety belts in passenger motor vehicles.	A State may use these grant funds for any safety purpose under this Title or for any project that corrects or improves a hazardous roadway location or feature or proactively addresses highway safety problems. However, at least $1 million of amounts received by States must be obligated for behavioral highway safety activities.	A State is eligible for an incentive grant if it did not have a conforming primary safety belt use law for all passenger motor vehicles in effect on or before December 31, 2002, and either: ▪ Enacts for the first time after December 31, 2002, and has in effect and is enforcing a conforming primary safety belt use law for all passenger motor vehicles; or, ▪ After December 31, 2005, has a State safety belt use rate of 85 percent or more for each of the 2 consecutive calendar years immediately preceding the fiscal year of the grant.	The Federal share payable for grants under this section is 100 percent.	SAFETEA-LU Section(s): 406, 2005	South Carolina Department of Public Safety

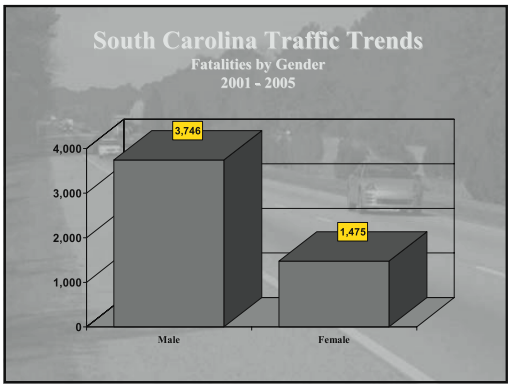
SAFETEA-LU FUNDING						
Name of the Program	**Purpose**	**Notes**	**Eligible Uses**	**Match Requirements**	**Statutory Reference**	**Administering State Agency**
STATE TRAFFIC SAFETY INFORMATION SYSTEM IMPROVEMENTS GRANTS	To encourage States to adopt and implement effective programs to improve the timeliness, accuracy, completeness, uniformity, integration, and accessibility of State data that is needed to identify priorities for national, State, and local highway and traffic safety programs; to evaluate the effectiveness of efforts to make such improvements; to link these State data systems, including traffic records, with other data systems within the State; and to improve the compatibility of the State data system with national data systems and data systems of other States to enhance the ability to observe and analyze national trends in crash occurrences, rates, outcomes, and circumstances.	A State may use these grant funds only to implement such data improvement programs.	To qualify for a first-year grant, a State must demonstrate the following: ▪ An established multi-disciplinary highway safety data and traffic records coordinating committee; ▪ A developed multi-year safety data and traffic records strategic plan, approved by the coordinating committee and containing performance-based measures; ▪ Certify that the State has adopted and is using the model data elements determined by the Secretary to be useful, or certify that grant funds will be used toward adopting and using the most elements practicable. To qualify for a subsequent-year grant, a State must: ▪ Certify that an assessment or audit of the State traffic records system has been conducted or updated within the preceding 5 years; ▪ Certify that the coordinating committee continues to operate and supports the multi-year plan; ▪ Specify how the grant funds and any other funds of the State will support the multi-year strategic plan; ▪ Demonstrate measurable progress toward achieving the goals and objectives identified in the multi-year plan; and ▪ Submit a report, showing measurable progress in the implementation of the multi-year plan.	The Federal share of programs funded this section shall not exceed 80 percent.	SAFETEA-LU Section(s): 408, 2006	South Carolina Department of Public Safety
ALCOHOL-IMPAIRED DRIVING COUNTERMEASURES INCENTIVE GRANTS	To encourage States to adopt and implement effective programs to reduce traffic safety problems resulting from individuals driving while under the influence of alcohol.	A state may use these grant funds to implement the impaired driving activities found in the Eligibility section, as well as costs for high visibility enforcement; the costs of training and equipment for law enforcement; the costs of advertising and educational campaigns that publicize checkpoints, increase law enforcement efforts and target impaired drivers under 34 years of age; the costs of a State impaired operator information system, and the costs of vehicle or license plate impoundment.	Meeting 3 of the following program criteria for FY 2006, 4 criteria for FY 2007, and 5 criteria for FYs 2008 and 2009: ▪ A Statewide program to conduct a series of high visibility law enforcement campaigns using checkpoints and/or saturation patrols. ▪ A State prosecution and adjudication outreach program that educates prosecutors and judges about the benefits of prosecuting and adjudicating repeat offenders. ▪ A program to increase the rate of BAC testing of drivers involved in fatal crashes. ▪ A law that imposes stronger sanctions or additional penalties for high-risk drivers whose BAC is 0.15 percent or more. ▪ Effective alcohol rehabilitation for repeat offenders or a program to refer them to DWI Courts. ▪ An effective strategy to prevent drivers under 21 from obtaining alcoholic beverages and for preventing others from making alcoholic beverages available to individuals under 21. ▪ An administrative driver's license suspension or revocation program for individuals who drive under the influence of alcohol. ▪ A program under which a significant portion of the fines or surcharges collected from individuals who are fined for driving while under the influence of alcohol are returned to communities so that comprehensive self-sustaining impaired driving prevention programs can be created. ▪ High Fatality Rate Grants: An additional Section 410 grant is available to assist the 10 States with the highest-impaired driving related fatalities as determined by the most recent data available in FARS. At least one-half of the amounts allocated under the High Fatality Rate Grant Program may be used only for Sobriety Check Point and/or Saturation Patrol Programs.	The Federal share of programs funded under this section shall not exceed 75 percent in the first and second years in which a State receives a grant, 50 percent in the third and fourth years in which a State receives a grant, and 25 percent in the fifth and sixth years in which a State receives a grant.	SAFETEA-LU Section(s): 410, 2007	South Carolina Department of Public Safety

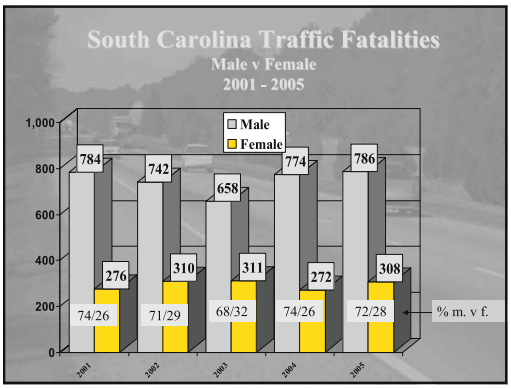
SAFETEA-LU FUNDING						
Name of the Program	**Purpose**	**Notes**	**Eligible Uses**	**Match Requirements**	**Statutory Reference**	**Administering State Agency**
CHILD SAFETY AND CHILD BOOSTER SEAT INCENTIVE GRANTS	To make grants available to States that are enforcing a law requiring any child riding in a passenger vehicle who is too large to be secured in a child safety seat to be secured in a child restraint that meets the requirements prescribed under section 3 of Anton's Law (49 USC 30127 note; 116 Stat. 2772).	These grant funds may be used only for child safety seat and child restraint programs. No more than 50 percent of the grant a State receives in a fiscal year shall be used to fund programs for purchasing and distributing child safety seats and restraints to low-income families. The remaining amounts shall be used to carry out child safety seat and child restraint programs including the following: ▪ Enforcement of child restraint laws. ▪ Training child passenger safety professionals, police officers, fire and emergency medical personnel, educators and parents concerning child safety seats and child restraints. ▪ Educating the public concerning the proper use and installation of child safety seats and child restraints.	▪ States are eligible to receive grants under this section by enacting and enforcing a law requiring any child passenger in a motor vehicle to be secured in a child restraint that meets the requirements prescribed under section 3 of Anton's Law.	Federal share shall not exceed 75 percent for the first 3 years of the grant and 50 percent for the fourth year.	SAFETEA-LU Section(s): 2011	South Carolina Department of Public Safety
GRANT PROGRAM TO PROHIBIT RACIAL PROFILING	To encourage States to enact and enforce a law that prohibits the use of racial profiling in highway law enforcement, and to maintain and allow public inspection of statistical information for each motor vehicle stop in the State regarding the race and ethnicity of the driver and any passengers.	States may use the grants for collecting and maintaining data on traffic stops; evaluating the results of such data; and developing and implementing programs to reduce the occurrence of racial profiling, including training.	▪ States are eligible to receive grants under this section two ways: 1) by enacting and enforcing a law that prohibits a State or local law enforcement officer from using the race or ethnicity of a driver to any degree in making routine or spontaneous law enforcement decisions, such as traffic stops, on Federal-aid highways (which include all public roads except local and minor rural roads); and by maintaining and allowing public inspection of statistical information on the race and ethnicity of the driver and any passengers for each such motor vehicle stop made by law enforcement officers; or 2) by providing satisfactory assurances to the Secretary that the State is undertaking activities that will lead to compliance with Section 1906.	The Federal share of the cost of activities carried out using Section 1906 funds is 80%.	SAFETEA-LU Section(s): 1906	South Carolina Department of Public Safety

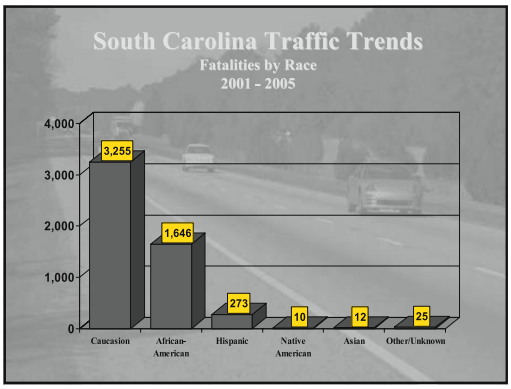
Appendix C

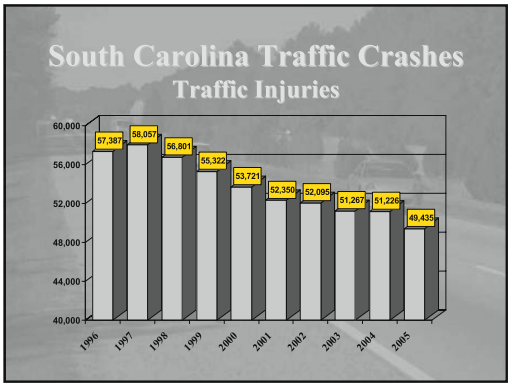
Data Analysis Slide Presentation











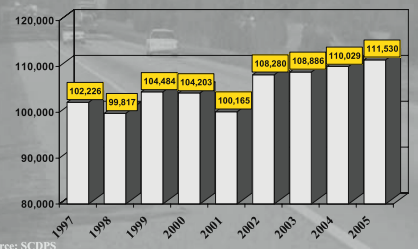




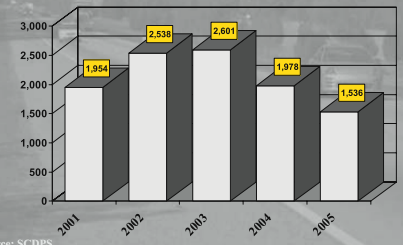

Leading Counties for Injuries 2001 - 2005

- Charleston 27,559
- Richland..... 22,710
- Greenville 19,481
- Horry 18,152
- Spartanburg..... 13,957
- Lexington 13,242

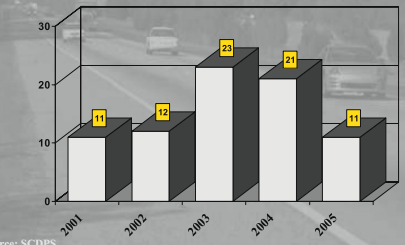
South Carolina Traffic Trends
Traffic Crashes



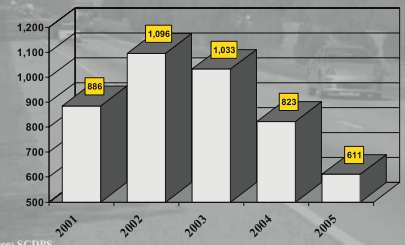
South Carolina Traffic Trends
Work Zone Traffic Crashes



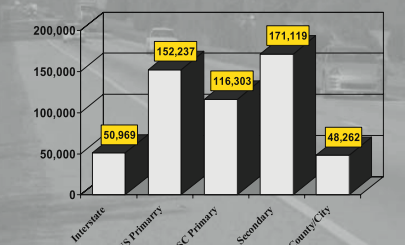
South Carolina Traffic Trends
Work Zone Traffic Fatalities



South Carolina Traffic Trends
Work Zone Traffic Injuries



Traffic Crashes by Route Category 2001 - 2005







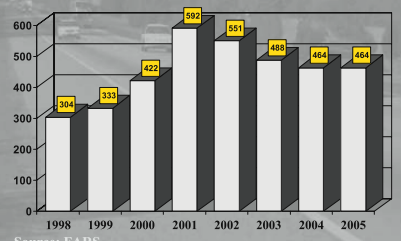

South Carolina Traffic Deaths
Where Does South Carolina Rank?
All Figures are for 2004 except Motorcycle Rate which was for 2003

Mileage Death Rate - 2004	5[1]
DUI Death Rate …….	4[1]
Motorcycle Death Rate …	1[2*]
Pedalcycle Death Rate ….	4[3]
Pedestrian Death Rate ….	7[3]
Speed Related Death Rate	1[1]

1 – Figure Based on Vehicle Miles of Travel
2 – Based on Registered Motorcycles
3 – Based on Resident Population

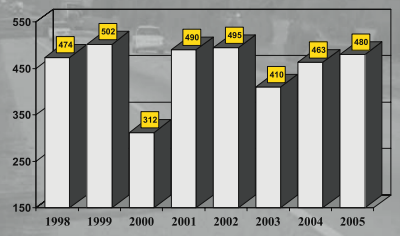
* 1st among the 50 states, 2nd if the District of Columbia is Included

South Carolina Traffic Trends
Alcohol/Drug Related Fatalities



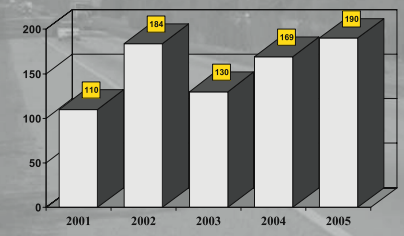
Source: FARS

South Carolina Traffic Trends
Fatalities in Speed Related Collisions



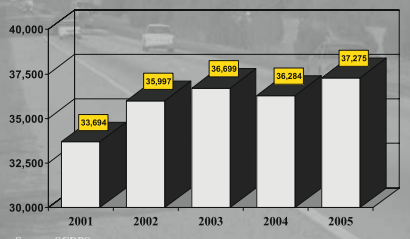
Source: FARS

South Carolina Traffic Trends
Fatalities in Tree Related Collisions



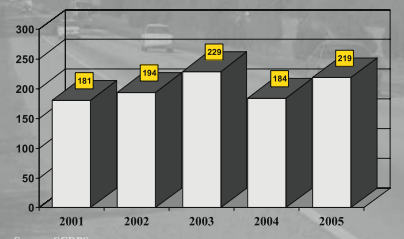
Source: FARS

South Carolina Traffic Trends
Intersection Crashes



Source: SCDPS
2005 figures are preliminary

South Carolina Traffic Trends
Intersection Crash Fatalities



Source: SCDPS
2005 figures are preliminary